YORK®
Heating and Air Conditioning

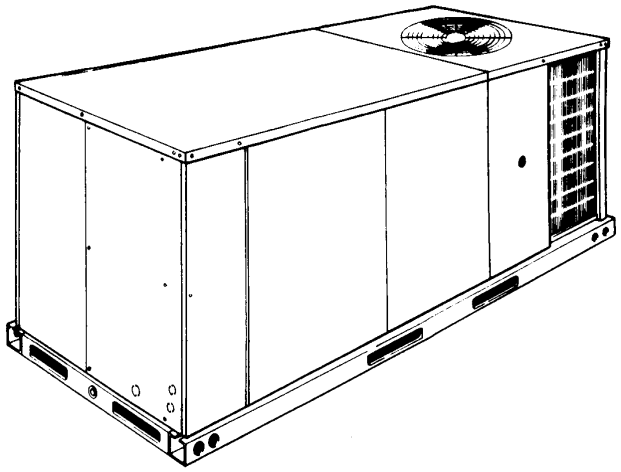
TECHNICAL GUIDE

SINGLE PACKAGE GAS/ELECTRIC UNITS AND SINGLE PACKAGE AIR CONDITIONERS

DY 036, 048 & 060

3, 4 & 5 NOMINAL TONS

14.00 SEER



DESCRIPTION

YORK Sunline Magnum™ units are convertible single package air conditioners with a common cabinet and a common roof curb for the 3, 4 and 5 ton sizes. The units were designed for light commercial and commercial applications. They can easily be installed on a roof curb, slab, roof jack or frame.

All units include:

- Powder Paint finish that meets ASTM-B-117 1000 hour salt spray standards
- Permanently lubricated motors
- Bottom or side air discharge configuration capability (field convertible)
- Manufactured under the quality standards of ISO9001
- **Simplicity**® Control Board
- Copper tube/aluminum fin coils
- Easy access to all components
- Rigging holes in base rails for lifting
- Fork lift slots on three sides
- Single point power connection
- Complete factory package - tested, charged and wired
- CSA agency listing on all units

WARRANTY

- Factory Limited Parts Warranty
- One-year parts warranty
- A Five-year parts warranty on the compressor and electric heat elements.
- Ten-year parts warranty on the gas-fired heat exchangers.

FOR DISTRIBUTION USE ONLY - NOT TO BE USED AT POINT OF RETAIL SALE

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PRODUCT NOMENCLATURE

3-5 Ton Sunline Magnum™ Model Number Nomenclature

D	Y	048	N04	A	2	A	AA	2	0	1	2	4	A

Product Category
D = A/C, Single Pkg., R-22

Product Identifier
Y = 14.0 SEER

Nominal Cooling Capacity
036 = 3.0 Ton
048 = 4.0 Ton
060 = 5.0 Ton

Heat Type and Nominal Heat Capacity
C00 = Cooling Only. Suitable for Field Installed Electric Heat

Gas Heat Options
N04 = 40 MBH Output Aluminized Steel, 1 Stage (036)
N06 = 60 MBH Output Aluminized Steel, 1 Stage (048)
N08 = 80 MBH Output Aluminized Steel, 1 Stage (036, 060)
N10 = 100 MBH Output Aluminized Steel, 1 Stage (048, 060)
D06 = 60 MBH Output Aluminized Steel, 2 Stage (036, 048, 060)
D10 = 100 MBH Output Aluminized Steel, 2 Stage (036*, 048, 060)
S04 = 40 MBH Output Stainless Steel, 1 Stage (036)
S06 = 60 MBH Output Stainless Steel, 1 Stage (048)
S08 = 80 MBH Output Stainless Steel, 1 Stage (036, 060)
S10 = 100 MBH Output Stainless Steel, 1 Stage (048, 060)
T06 = 60 MBH Output Stainless Steel, 2 Stage (036, 048, 060)
T10 = 100 MBH Output Stainless Steel, 2 Stage (036*, 048, 060)

Electric Heat Options
E05 = 5 KW
E07 = 7 KW
E10 = 10 KW
E15 = 15 KW
E20 = 20 KW
E30 = 30 KW

*(D, T)10 = 92 MBH Output on 036 Models

Airflow
A = Direct Drive
B = Direct Drive/Single Input Economizer
D = Direct Drive/Motorized Damper

Voltage
1 = 208/230-1-60
2 = 208/230-3-60
4 = 460-3-60
5 = 575-3-60

Installation Options
A = No Options Installed
B = Option 1
C = Option 2
D = Options 1 & 2
E = Option 3
F = Option 4
G = Options 1 & 3
H = Options 1 & 4
J = Options 1, 2 & 3
K = Options 1, 2, & 4
L = Options 1,3 & 4
M = Options 1, 2, 3, & 4
N = Options 2 & 3
P = Options 2 & 4
Q = Options 2, 3, & 4
R = Options 3 & 4
S = Option 5
T = Options 1 & 5
U = Options 1, 3, & 5
V = Options 1, 4, & 5
W = Options 1, 3, 4, & 5
X = Options 3 & 5
Y = Options 4 & 5
Z = Options 3, 4 & 5

Options
1 = Disconnect
2 = Non-Pwr'd Conv. Outlet
3 = Smoke Detector S.A.
4 = Smoke Detector R.A.
5 = Pwr'd Conv. Outlet

Product Generation
2 = Second Generation

Additional Options

Standard Cabinet	Hinged Filter Door & Toolless Access Cabinet
AA = None AB = Phase Monitor AC = Coil Guard AD = Dirty Filter Switch AE = Phase Monitor & Coil Guard AF = Phase Monitor & Dirty Filter Switch AG = Coil Guard & Dirty Filter Switch AH = Phase Monitor, Coil Guard & Dirty Filter Switch AS = Bottom Drain Connection RC = Coil Guard & American Flag TA = Technicoat Condenser Coil TJ = Technicoat Evaporator Coil TS = Technicoat Evaporator and Condenser Coil	BA = Hinged Filter Door & Toolless Access Panels BB = Phase Monitor, Hinged Filter Door & Toolless Access Panels BC = Coil Guard, Hinged Filter Door & Toolless Access Panels BD = Dirty Filter Switch, Hinged Filter Door & Toolless Access Panels BE = Phase Monitor & Coil Guard, Hinged Filter Door & Toolless Access Panels BF = Phase Monitor & Dirty Filter Switch, Hinged Filter Door & Toolless Access Panels BG = Coil Guard & Dirty Filter Switch, Hinged Filter Door & Toolless Access Panels BH = Phase Monitor, Coil Guard & Dirty Filter Switch, Hinged Filter Door & Toolless Access Panels

ZZ = If desired option combination is not listed above, ZZ will be assigned and configuration options will be located in digits 15-18.

Configuration Options (not required for all units)
These four digits will not be assigned until a quote is requested, or an order placed.

- SS Drain Pan
- CPC Controller, DFS, APS
- Johnson Controller, DFS, APS
- Honeywell Controller, DFS, APS
- Novar Controller, DFS, APS
- Simplicity IntelliComfort Controller
- Simplicity IntelliComfort Controller w/ModLinc
- 2" Pleated filters
- BAS Ready Economizer (2-10 V.D.C. Actuator without a Controller)
- Any Combination of Additional Options that Don't Have an Option Code Pre-assigned

Product Style
A = Style A

FEATURES

All models are available with a wide variety of factory-mounted options such as stainless steel heat exchangers, electric heaters, phase monitor, convenience outlet, dirty filter switch, disconnect switch, smoke detectors, and coil guard to make them suitable for almost every application.

All units are self-contained and assembled on full perimeter base rails with forklift holes on three sides and holes for overhead rigging. Every unit is completely piped, wired, charged and tested at the factory to simplify the field installation and to provide years of dependable operation.

All models (including those with an economizer) are suitable for either bottom or horizontal duct connections. For bottom duct, remove the sheet metal panels from the supply and return air openings through the base of the unit. For horizontal duct, remove the supply and return air panels on the rear of the unit.

All models are available with these “factory mounted” outdoor air damper options:

- Single enthalpy economizer
- Motorized outdoor air damper

Supply air blowers are equipped with a 5 speed direct drive motor that can be adjusted to meet the exact requirements of the job.

All compressors are equipped with internal pressure relief. Every refrigerant circuit includes a liquid line filter-drier, a high pressure switch and a suction line with a freezestat and low pressure/loss of charge switch to protect all system components.

- **Simplicity® Controls - Simplicity®** control boards have standardized a number of features previously available only as options or by utilizing additional controls.
  - **Low Ambient** - An integrated low-ambient control allows all units to operate in the cooling mode down to 0ºF outdoor ambient without additional assistance. Optionally, the control board can be programmed to lockout the compressors when the outdoor air temperature is low or when free cooling is available.
  - **Anti-Short Cycle Protection** - To aid compressor life, an anti-short cycle delay is incorporated into the standard controls. Compressor reliability is further ensured by programmable minimum run times. For testing, the anti short cycle delay can be temporarily overridden with the push of a button.
  - **Fan Delays** - Fan on and fan off delays are fully programmable and are independent of one another. All units are programmed with default values based upon their configuration of cooling and heat.
  - **Safety Monitoring** - The control board monitors the high and low-pressure switches, the freezestats, the gas valve, if applicable, and the temperature limit switch on gas heat units. The unit control board will alarm on ignition failures, compressor lockouts and repeated limit switch trips.
  - **Nuisance Trip Protection**- To prevent nuisance trouble calls, the control board uses a “three strikes, you’re out” philosophy. The high and low-pressure switches and the freezestats must trip three times within two hours before the unit control board will lock out the compressor.
  - **On Board Diagnostics** - Each alarm will energize a trouble light on the thermostat, if so equipped, and flash an alarm code on the control board LED. Each high and low-pressure switch alarm as well as each freezestat alarm has its own flash code. The control board saves the five most recent alarms in memory, and these alarms can be reviewed at any time. Alarms and programmed values are retained through the loss of power.

All units have long lasting powder paint cabinets with 1000 hour salt spray test approval under ASTM-B117 procedures.

All models are CSA listed.

- **Warranty** - All models include a one-year limited parts warranty on the complete unit. Compressors and electric heater elements carry a five-year warranty. Gas heat exchangers carry a 10-year parts warranty.
- **Gas Heat Operation** - All single phase models with gas heat have minimum annual fuel utilization efficiency (AFUE) of 80%. All three phase models with gas heat have minimum steady state efficiency of 80%. Each section includes a durable heat exchanger with aluminized steel or optional stainless steel tubes, a redundant gas valve, spark ignition, power venting, an ignition module for 100% shut-off and all of the safety controls required to meet the latest ANSI standards.

  The gas supply piping can be routed into the heating compartment through a hole in the base pan of the unit or through a knockout in the piping panel on the front of the unit.
- **Electric Heat Operation** - All electric heat models are wired for a single power source and include a bank of nickel chromium elements mounted at the discharge of the supply air blower to provide a high velocity and uniform distribution of air across the heating elements. Every element is fully protected against excessive temperature by thermal limit switches.

  The power supply wiring can be routed into the control box through a threaded pipe connection (field supplied) in the base pan of the unit or through a knockout in the wiring panel on the side of the unit.
- **BAS Controls** - York’s Sunline™ series units offer factory mounted BAS controls such as Simplicity® INTELLI-Comfort™, Novar, Honeywell, Johnson, and CPC.

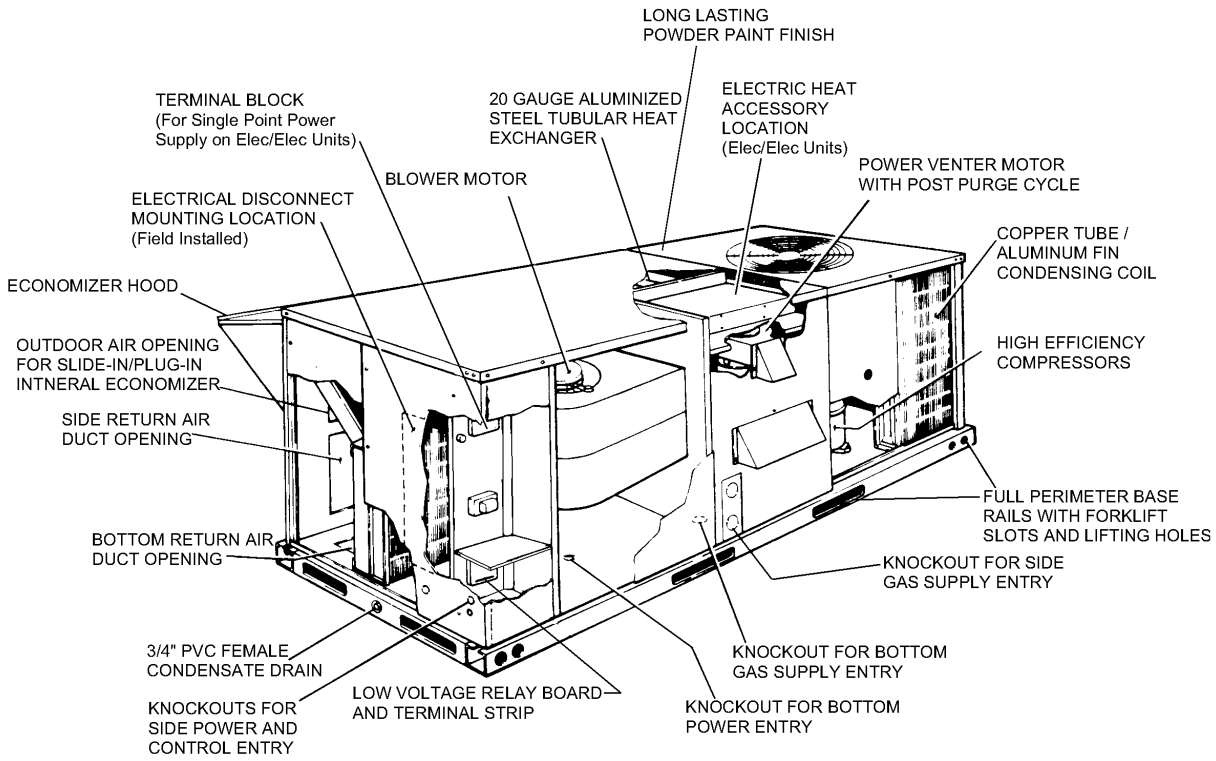


FIGURE 1 - UNIT CUTAWAY

FACTORY-INSTALLED OPTIONS

- **SINGLE INPUT ELECTRONIC ENTHALPY ECONOMIZERS** - Includes a slide-in / plug-in damper assembly with fully modulating spring-return motor actuator capable of introducing up to 100% outdoor air with nominal 1% leakage type dampers.

  The enthalpy system contains one sensor that monitors the outdoor air and determines when the air is cool enough and dry enough to provide free cooling.

  The rainhood is painted to match the basic unit and must be field-assembled before installing.

- **MOTORIZED OUTDOOR AIR INTAKE DAMPER** - Includes a slide-in / plug-in damper assembly with a 2-position, spring return motor actuator which opens to a pre-set position whenever the supply air blower is operating and will drive fully closed when the blower unit shuts down.

  The rain hood is painted to match the basic unit and must be field assembled before installing.

- **PHENOLIC COATED EVAPORATOR AND CONDENSER COILS** - Special coating process that utilizes Technicoat 10-1™ processes. Coating is applied by total immersion of the complete coil for maximum protection.

- **ELECTRIC HEATERS** - Wired for single point power supply. These nickel chromium heater elements are provided with limit and automatic reset capability to prevent operation at excessive temperatures.

- **FILTER OPTIONS** - Standard units are shipped with 1” throw-away filters installed. 2” pleated filters are offered as a factory installed option.

- **CONVENIENCE OUTLET -** This 110 volt outlet can be “powered” by the unit with a stepdown transformer or the unit may be ordered with a “non-powered” convenience outlet that can be wired in the field.

- **DISCONNECT SWITCH** - For gas heat units and cooling units with electric heat, a HACR breaker sized to the unit is provided. For cooling only units, a switch sized to the largest electric heat available for the particular unit is provided. Factory installed option only.

- **BAS - Building Automation System Controls Simplicity® INTELLI-Comfort™ CONTROL -** The York® Simplicity® INTELLI-Comfort™ control is factory installed. It includes a supply air sensor, a return air sensor, and an outside air sensor. There are provisions for a field installed dirty filter indicator switch, an air-proving switch, an Outside Air Humidity sensor, a Return Air Humidity sensor, an Inside IAQ sensor, and an Outside Air IAQ sensor. Construction mode operation, 365-day real time clock with 7 day programming plus holiday scheduling is built-in. Two different modes of demand ventilation are achieved through the INTELLI-Comfort™ using CO2 sensors. It uses an inside CO2 sensor to perform Demand Ventilation. It can also use an Outside CO2 sensor to perform Differential Demand Ventilation. It uses a Patented Comfort Ventilation algorithm to provide comfortable ventilation

air temperature. The patented economizer-loading algorithm will protect the equipment when harsh operating conditions exist. Humidity in the occupied space or return duct can be monitored and controlled via humidity sensors and the on-board connection for hot gas re-heat system. It uses the INTELLI-Start™ algorithm to maximize energy savings by recovering the building from the Unoccupied Setpoints to the Occupied Setpoints just in time for the Occupied Time Period to begin. The Simplicity® INTELLI-Comfort™ balances space temperature, ventilation air temperature, CO2 and humidity for ultimate comfort.

- **Simplicity® INTELLI-Comfort™ with MOD LINK CONTROL -** The York® Simplicity® INTELLI-Comfort™ with Mod Link control is factory installed. It includes all the features of the INTELLI-Comfort™ control with an additional control to translate communications from MODBUS to the BACnet MSTP protocol.
- **Novar® BAS CONTROL -** The Novar® ETC-3 building automation system controller is factory installed. Includes supply air sensor, return air sensor, dirty filter indicator switch, and air proving switch.
- **JOHNSON CONTROLS BAS CONTROL -** The Johnson Control YK-UNT-1126 building automation system controller is factory installed. Includes supply air sensor, return air sensor, dirty filter indicator switch, and air proving switch.
- **CPC BAS CONTROL -** The Computer Process Controls Model 810-3060 ARTC Advanced Rooftop building automation system controller is factory installed. Includes supply air sensor, return air sensor, dirty filter indicator switch and air proving switch.
- **HONEYWELL BAS CONTROL -** The Honeywell W7750C building automation system controller is factory installed. Includes air supply sensor, return air sensor, dirty filter indicator switch, and air proving switch.
- **SMOKE DETECTORS** - (supply air & return air) The smoke detectors stop operation of the unit by interrupting power to the control board if smoke is detected within the air compartment.
- **COIL GUARD** - Customers can purchase a coil guard kit to protect the condenser coil from damage. This is not a hail guard kit.

⚠WARNING

Factory installed Smoke Detectors in the Return Air, may be subjected to freezing temperatures during "off" times due to Out Side Air infiltration. These Smoke Detectors have an operational limit of 32°F to 131°F. Smoke Detectors installed in areas that could be out side those limitations will have to be moved to prevent having false alarms.

- **STAINLESS STEEL HEAT EXCHANGER** - For applications in corrosive environments, this option provides a full stainless steel heat exchanger assembly.
- **STAINLESS STEEL DRAIN PAN -** An optional rust-proof stainless steel drain pan is available to provide years of trouble-free operation in corrosive environments.
- **BOTTOM DRAIN CONNECTION -** An optional bottom drain connection is available for inside the curb connections for applications in cold environments to reduce freezing drain lines.
- **PHASE MONITORS** - Designed to prevent unit damage. The phase monitor will shut the unit down in an out-of-phase condition.
- **DIRTY FILTER SWITCH** - This kit includes a differential pressure switch that energizes the fault light on the unit thermostat, indicating that there is an abnormally high pressure drop across the filters. Factory installed option or field installed accessory.
- **HINGED FILTER DOOR/"TOOLLESS" BLOWER AND ACCESS PANELS** (not hinged) - This option allows for easy access and maintenance.

  NOTE: Knobs are shipped inside the unit to prevent shipping damage. These must be field installed for tool-less operation.

FIELD-INSTALLED ACCESSORIES

- **SINGLE INPUT ELECTRONIC ENTHALPY ECONOMIZERS** - Includes a slide-in / plug-in damper assembly with fully modulating spring-return motor actuator capable of introducing up to 100% outdoor air with nominal 1% leakage type dampers.

  The enthalpy system contains one sensor that monitors the outdoor air and determines when the air is cool enough and dry enough to provide free cooling.

  The rainhood is painted to match the basic unit and must be field-assembled before installing.

- **MOTORIZED OUTDOOR AIR INTAKE DAMPER** - Includes a slide-in / plug-in damper assembly with a 2-position, spring return motor actuator which opens to some pre-set position whenever the supply air blower is operating and will drive fully closed when the blower unit shuts down.

  The rain hood is painted to match the basic unit and must be field assembled before installing.

- **ELECTRIC HEATERS** wired for single point power supply. These nickel chromium heater elements are provided with limit and automatic reset capability to prevent operation at excessive temperatures.

- **ROOF CURBS** - Eight and fourteen-inch high roof curbs provide a water-tight seal between the unit and the finished roof. These full perimeter curbs meet the requirements of the National Roofing Contractors Association (NRCA) and are shipped knocked-down for field assembly.

  Roof curbs are designed to fit inside the base rails of the unit and include both a wood nailing strip and duct hanger supports.

- **HIGH ALTITUDE NATURAL GAS** - Burner orifices and pilot orifices are provided for proper furnace operation at altitudes up to 6,000 feet.

- **PROPANE** - Burner orifices, pilot orifices and gas valve parts are provided to convert a natural gas furnace to propane.

- **HIGH ALTITUDE PROPANE** - Burner orifices and pilot orifices are provided for proper furnace operation at altitudes up to 6,000 feet. This accessory supplements the basic propane conversion kit.

- **LOW NOX KIT** - Required to reduce the emission of nitrogen oxides below 40 nano grams per joule.

- **POWER EXHAUST** - Our single input economizer options are available with power exhaust. Whenever the outdoor air intake dampers are opened for free cooling, the exhaust fan will be energized to prevent the conditioned space from being over-pressurized during economizer operation.

  The power exhaust option can only be used on bottom duct configurations.

- **BAROMETRIC RELIEF DAMPER** - This damper accessory can be used to relieve internal building air pressure on units with an economizer without power exhaust. This accessory includes a rain hood, a bird screen and a fully assembled damper. With bottom duct connections, the damper should be mounted over the opening in the return air panel. With horizontal ductwork, the accessory should be mounted on the return air duct.

- **ENTHALPY ACCESSORY CONTROL KIT** - This kit contains the required components to convert a single enthalpy economizer to dual enthalpy.

- **BURGLAR BARS** - Mount in the supply and return openings to prevent entry into the duct work.

- **FLUE EXHAUST EXTENSION KIT** - In locations with wind or weather conditions which may interfere with proper exhausting of furnace combustion products, this kit can be installed to prevent the flue exhaust from entering nearby fresh air intakes.

- **CO_2 SENSOR** - Senses CO_2 levels and automatically overrides the economizer when levels rise above the present limits.

- **COIL GUARD** - Customers can purchase a coil guard kit to protect the condenser coil from damage. This is not a hail guard kit.

- **HAIL GUARD** - Hail Guard kit is available to prevent unit from hail damage. This is a sloped hood that fits above the coil.

- **GAS PIPING KIT** - This kit supplies all necessary fittings and shut off valve.

TABLE 1: CAPACITY RATINGS - (ARI 210/240)[1]

MODEL	MBH	EER[2]	SEER[3]	CFM	SOUND RATING (Db)[4]
DY036	35.6	12	14	1200	84
DY048	46.0	12	14	1600	83
DY060	59.0	11.6	14	1750	81

1. 80/67°F Indoor and 95°F outdoor.
2. EER = Energy Efficiency Ratio at full load - the cooling capacity in Btu's per hour (Btuh) divided by the power input in watts, expressed in Btuh per watt (Btuh/watt).
3. SEER = Seasonal Energy Efficiency Ratio.
4. Rated in accordance with ARI 270 Standard.

TABLE 2: GAS HEAT RATINGS[1]

MODEL	MBH INPUT	MBH OUTPUT	AFUE (%)	TEMP RISE ºF
DY036N04	50	40	80.9	15 - 45
DY036N08	100	80	80.5	40 - 70
DY048N06	75	60	80.9	25 - 55
DY048N10	125	100	80.3	45 - 75
DY060N08	100	80	80.5	25 - 55
DY060N10	125	100	80.3	35 - 65

1. All units are single-stage heating.

TABLE 3: 2 STAGE GAS HEAT RATINGS

MODEL[1]	MBH INPUT		MBH OUTPUT		STEADY STATE EFFICIENCY		RISE		MINIMUM HEATING AIRFLOW (CFM)
	1ST STAGE	2ND STAGE	1ST STAGE	2ND STAGE	1ST STAGE	2ND STAGE	MIN.	MAX.	
DY036D06	45	75	35.8	60.8	79.4	81.1	35	70	790
DY036D10	69	115	55.2	92	80.0	80.2	55	90	950
DY048D06	45	75	35.7	60.8	79.4	81.1	25	70	790
DY048D10	75	125	60.4	100.6	80.5	80.5	45	75	1230
DY060D06	45	75	35.8	60.8	79.4	81.1	35	70	1010
DY060D10	75	125	60.4	100.6	80.5	80.5	45	75	1230

1. Models are 3Ø only.

TABLE 4: DY036 INDOOR SOUND POWER LEVELS (HORIZONTAL DUCTED INLET)

UNIT DESCRIPTION / MODEL	DY036 / 3 Ton							
CONFIGURATION	Horizontal Ducted Inlet							
Indoor Blower Speed (RPM)	630		631		879		885	
Blower Static Pressure (IWG)	0.2		0.3		0.2		0.7	
Airflow (CFM)	1116		928		1979		1020	
Blower Motor BHP	0.41		0.37		0.76		0.53	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	80	82	80	82	78	83	81	85
125	76	77	76	77	82	83	81	82
250	56	59	56	60	60	61	58	60
500	50	50	49	50	54	54	51	52
1000	40	43	39	42	49	50	44	45
2000	41	42	40	42	49	49	43	44
4000	41	41	41	41	49	49	41	41
8000	45	45	45	45	47	47	45	45

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 5: DY036 INDOOR SOUND POWER LEVELS (HORIZONTAL DUCTED DISCHARGE)

UNIT DESCRIPTION / MODEL	DY036 / 3 Ton							
CONFIGURATION	Horizontal Ducted Discharge							
Indoor Blower Speed (RPM)	630		631		879		885	
Blower Static Pressure (IWG)	0.2		0.3		0.2		0.7	
Airflow (CFM)	1116		928		1979		1020	
Blower Motor BHP	0.41		0.37		0.76		0.53	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	80	84	80	83	85	87	84	87
125	74	77	74	76	80	82	80	83
250	58	61	58	61	68	68	63	65
500	48	51	47	50	58	58	53	54
1000	41	45	39	43	55	55	49	50
2000	39	41	37	39	53	53	46	47
4000	41	41	38	38	55	55	49	49
8000	45	45	44	44	52	53	47	47

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 6: DY036 INDOOR SOUND POWER LEVELS (VERTICAL DUCTED INLET)

UNIT DESCRIPTION / MODEL	DY036 / 3 Ton							
CONFIGURATION	Vertical Ducted Inlet							
Indoor Blower Speed (RPM)	632		632		881		883	
Blower Static Pressure (IWG)	0.2		0.3		0.2		0.7	
Airflow (CFM)	1069		870		1903		917	
Blower Motor BHP	0.36		0.33		0.71		0.49	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	78	82	78	82	80	85	80	84
125	70	75	70	74	71	80	71	79
250	55	60	55	60	59	61	58	62
500	47	50	47	50	52	53	49	52
1000	40	43	39	43	50	51	45	46
2000	37	40	37	39	45	46	41	43
4000	36	37	36	37	45	46	40	40
8000	44	44	44	44	45	47	44	44

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 7: DY036 INDOOR SOUND POWER LEVELS (VERTICAL DUCTED DISCHARGE)

UNIT DESCRIPTION / MODEL	DY036 / 3 Ton							
CONFIGURATION	Vertical Ducted Discharge							
Indoor Blower Speed (RPM)	632		632		881		883	
Blower Static Pressure (IWG)	0.2		0.3		0.2		0.7	
Airflow (CFM)	1069		870		1903		917	
Blower Motor BHP	0.36		0.33		0.71		0.49	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	80	83	80	83	83	86	82	85
125	78	79	77	78	80	83	79	82
250	55	60	54	59	63	63	58	62
500	48	51	46	50	58	59	52	53
1000	41	44	39	43	54	55	48	49
2000	37	40	35	38	50	50	42	44
4000	38	39	36	37	52	53	44	44
8000	44	45	44	44	49	50	45	45

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 8: DY048 INDOOR SOUND POWER LEVELS (HORIZONTAL DUCTED INLET)

UNIT DESCRIPTION / MODEL	DY048 / 4 Ton							
CONFIGURATION	Horizontal Ducted Inlet							
Indoor Blower Speed (RPM)	766		769		1077		1087	
Blower Static Pressure (IWG)	0.2		0.5		0.4		1.0	
Airflow (CFM)	1484		993		2270		1406	
Blower Motor BHP	0.67		0.54		1.24		0.90	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	74	97	74	95	77	90	77	90
125	70	86	69	86	73	78	72	77
250	53	58	52	57	60	61	58	61
500	49	55	47	54	54	56	51	53
1000	42	42	38	39	50	55	45	45
2000	40	44	38	43	48	51	45	46
4000	38	44	36	41	48	52	43	45
8000	42	43	42	44	45	48	44	45

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 9: DY048 INDOOR SOUND POWER LEVELS (HORIZONTAL DUCTED DISCHARGE)

UNIT DESCRIPTION / MODEL	DY048 / 4 Ton							
CONFIGURATION	Horizontal Ducted Discharge							
Indoor Blower Speed (RPM)	766		769		1077		1087	
Blower Static Pressure (IWG)	0.2		0.5		0.4		1.0	
Airflow (CFM)	1484		993		2270		1406	
Blower Motor BHP	0.67		0.54		1.24		0.90	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	77	97	75	95	84	91	82	91
125	72	86	69	85	81	83	78	80
250	60	62	57	59	71	71	66	67
500	53	56	49	54	60	61	55	56
1000	47	47	42	43	58	59	52	52
2000	45	46	40	43	54	55	50	50
4000	46	47	40	42	57	58	52	52
8000	47	47	45	45	54	54	48	49

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 10: DY048 INDOOR SOUND POWER LEVELS (VERTICAL DUCTED INLET)

UNIT DESCRIPTION / MODEL	DY048 / 4 Ton							
CONFIGURATION	Vertical Ducted Inlet							
Indoor Blower Speed (RPM)	791		794		1084		1095	
Blower Static Pressure (IWG)	0.2		0.5		0.2		1.0	
Airflow (CFM)	1408		1000		2336		1275	
Blower Motor BHP	0.54		0.42		1.12		0.73	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	76	95	77	93	80	91	79	91
125	68	84	67	82	76	84	73	80
250	54	57	52	56	63	61	57	59
500	48	53	46	53	54	57	50	53
1000	43	44	40	41	52	52	47	47
2000	40	43	38	42	49	51	44	46
4000	38	43	36	40	49	54	43	45
8000	43	43	43	43	45	47	44	44

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 11: DY048 INDOOR SOUND POWER LEVELS (VERTICAL DUCTED DISCHARGE)

UNIT DESCRIPTION / MODEL	DY048 / 4 Ton							
CONFIGURATION	Vertical Ducted Discharge							
Indoor Blower Speed (RPM)	791		794		1084		1095	
Blower Static Pressure (IWG)	0.2		0.5		0.2		1.0	
Airflow (CFM)	1408		1000		2336		1275	
Blower Motor BHP	0.54		0.42		1.12		0.73	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	78	95	77	93	85	92	82	91
125	73	84	72	82	84	87	78	82
250	56	58	53	56	68	68	60	61
500	51	54	48	53	61	62	54	55
1000	46	46	43	44	57	57	50	50
2000	42	44	38	42	53	54	46	48
4000	43	45	39	41	55	57	49	50
8000	44	44	43	43	52	52	46	47

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 12: DY060 INDOOR SOUND POWER LEVELS (HORIZONTAL DUCTED INLET)

UNIT DESCRIPTION / MODEL	DY060 / 5 Ton							
CONFIGURATION	Horizontal Ducted Inlet							
Indoor Blower Speed (RPM)	840		845		1166		1188	
Blower Static Pressure (IWG)	0.2		0.6		0.3		1.3	
Airflow (CFM)	1695		1100		2618		1323	
Blower Motor BHP	0.67		0.50		1.51		0.80	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	77	84	77	84	81	85	79	84
125	71	71	72	73	74	75	71	72
250	57	58	55	56	66	66	60	61
500	53	53	51	51	60	60	55	55
1000	50	50	45	46	60	60	53	53
2000	49	49	43	44	58	58	50	50
4000	49	49	42	43	59	59	47	47
8000	49	49	48	48	54	54	47	47

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 13: DY060 INDOOR SOUND POWER LEVELS (HORIZONTAL DUCTED DISCHARGE)

UNIT DESCRIPTION / MODEL	DY060 / 5 Ton							
CONFIGURATION	Horizontal Ducted Discharge							
Indoor Blower Speed (RPM)	840		845		1166		1188	
Blower Static Pressure (IWG)	0.2		0.6		0.3		1.3	
Airflow (CFM)	1695		1100		2618		1323	
Blower Motor BHP	0.67		0.50		1.51		0.80	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	82	87	79	88	88	89	82	87
125	75	76	72	74	82	83	78	78
250	69	69	66	66	79	79	73	73
500	64	64	60	60	72	72	66	66
1000	59	60	55	56	68	68	61	61
2000	55	55	50	50	65	65	57	57
4000	58	58	52	52	68	68	60	60
8000	55	55	49	49	66	67	56	56

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 14: DY060 INDOOR SOUND POWER LEVELS (VERTICAL DUCTED INLET)

UNIT DESCRIPTION / MODEL	DY060 / 5 Ton							
CONFIGURATION	Vertical Ducted Inlet							
Indoor Blower Speed (RPM)	834		840		1171		1194	
Blower Static Pressure (IWG)	0.2		0.6		0.2		1.3	
Airflow (CFM)	1525		1019		2624		1256	
Blower Motor BHP	0.61		0.44		1.43		0.83	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	77	86	79	88	81	86	83	87
125	69	70	70	72	71	73	72	72
250	56	63	56	58	64	72	63	69
500	50	52	48	49	57	59	53	56
1000	48	51	44	45	57	58	49	52
2000	43	47	39	41	54	57	47	50
4000	47	49	40	41	55	61	47	52
8000	46	47	44	45	51	57	47	49

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 15: DY060 INDOOR SOUND POWER LEVELS (VERTICAL DUCTED DISCHARGE)

UNIT DESCRIPTION / MODEL	DY060 / 5 Ton							
CONFIGURATION	Vertical Ducted Discharge							
Indoor Blower Speed (RPM)	834		840		1171		1194	
Blower Static Pressure (IWG)	0.2		0.6		0.2		1.3	
Airflow (CFM)	1525		1019		2624		1256	
Blower Motor BHP	0.61		0.44		1.43		0.83	
Octave Center Freq.	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)	ID Blower Only (dB)	Cooling Operation[2] (dB)
63	83	88	82	88	91	91	85	88
125	78	78	75	76	85	85	79	79
250	66	67	62	62	77	78	70	72
500	59	60	54	54	70	70	61	61
1000	57	58	51	51	68	68	57	58
2000	51	52	45	45	62	63	52	53
4000	54	54	47	47	65	66	55	56
8000	52	52	46	47	65	66	52	53

1. Tested in accordance with ARI Standard 260. Refer to 2001 Standard for Sound Rating of Ducted Air Moving and Conditioning Equipment.
2. Cooling Operation – ID blower, compressor and outdoor fan operating.
3. Test Duct Dimension: 12 in. wide x 18 in. high x 8 ft. long (0.30m x 0.46m x 2.44m).
4. Test duct termination is flush with reverberation room wall.
5. Duct end (sound reflection) correction: (11, 6, 3, 1, 0, 0, 0, 0) dB at (63, 125, 250, 500, 1k, 4k, 8k) Hz.

TABLE 16: DY036 COOLING CAPACITIES (3 TON)

Air on Evap-orator Coil		Temperature of Air on Condenser Coil																		
		75°F									85°F									
CFM	WB (°F)	Total Cap.[1] (MBH)	Total[2] Input (kW)	Sensible Capacity (MBH)[1] Return Dry Bulb (°F)							Total Cap.[1] (MBH)	Total[2] Input (kW)	Sensible Capacity (MBH)[1] Return Dry Bulb (°F)						
				86	83	80	77	74	71	68			86	83	80	77	74	71	68
900	72	44	2.3	24	21	19	16	14	-	-	41	2.5	23	20	18	15	12	-	-
	67	42	2.3	30	28	25	23	20	18	15	38	2.5	29	26	24	21	18	16	13
	62	40	2.3	40	35	33	30	28	25	23	35	2.5	35	32	30	27	25	22	20
	57	39	2.3	39	37	35	32	30	27	25	35	2.5	35	34	31	28	26	23	21
1050	72	44	2.2	26	23	20	17	14	-	-	42	2.5	25	22	19	16	13	-	-
	67	42	2.3	33	30	27	24	21	18	15	39	2.5	31	28	25	22	19	16	13
	62	40	2.3	40	38	35	32	29	26	23	35	2.5	35	34	32	29	26	23	20
	57	39	2.3	39	38	37	34	31	28	25	35	2.5	35	35	33	30	27	24	21
1200	72	44	2.2	28	25	21	18	14	-	-	43	2.5	27	24	20	17	13	-	-
	67	43	2.3	35	32	28	25	21	18	14	40	2.5	34	31	27	24	20	17	13
	62	40	2.3	40	40	37	33	30	26	23	36	2.5	36	36	34	31	27	24	20
	57	39	2.3	39	39	39	36	32	29	25	36	2.5	36	36	36	32	29	25	22
1350	72	45	2.2	30	26	22	18	14	-	-	43	2.5	29	25	21	17	13	-	-
	67	43	2.3	37	33	29	25	21	18	14	40	2.5	36	32	28	24	20	16	12
	62	41	2.3	41	41	39	35	31	27	23	37	2.5	37	37	36	32	28	24	20
	57	40	2.3	40	40	40	36	32	28	24	36	2.5	36	36	36	32	28	24	20
1500	72	46	2.3	32	27	23	18	14	-	-	44	2.5	31	27	22	18	13	-	-
	67	44	2.3	40	35	31	26	22	17	13	41	2.5	39	34	30	25	21	16	12
	62	42	2.3	42	42	42	37	33	28	24	37	2.5	37	37	37	33	28	24	19
	57	41	2.3	41	41	41	36	32	27	23	37	2.5	37	37	37	32	28	23	19
		95°F									105°F									
900	72	38	2.7	21	19	16	14	11	-	-	35	3.0	20	17	15	12	10	-	-
	67	35	2.7	27	24	22	19	17	14	12	31	2.9	25	23	20	18	15	12	10
	62	30	2.7	30	29	27	24	22	19	17	27	3.0	27	26	24	21	19	16	14
	57	30	2.7	30	30	27	25	22	19	17	27	3.0	27	27	25	22	20	17	15
1050	72	39	2.7	24	21	18	15	12	-	-	36	3.0	22	19	16	13	10	-	-
	67	36	2.7	30	27	24	21	18	15	12	32	2.9	28	25	22	19	16	13	10
	62	31	2.7	31	31	30	26	23	20	17	28	2.9	28	28	26	23	20	17	14
	57	31	2.7	31	31	30	27	24	21	18	28	2.9	28	28	27	24	21	18	15
1200	72	41	2.7	26	23	19	16	12	-	-	37	2.9	25	21	18	14	11	-	-
	67	37	2.7	33	30	26	23	19	16	12	33	2.8	31	28	24	21	17	14	10
	62	32	2.7	32	32	32	29	25	22	18	29	2.9	29	29	29	25	22	18	15
	57	32	2.7	32	32	32	29	25	22	18	29	2.9	29	29	30	26	23	19	16
1350	72	41	2.7	28	24	20	16	12	-	-	37	3.0	27	23	19	15	11	-	-
	67	37	2.7	35	31	27	23	19	15	11	33	2.9	32	29	25	21	17	13	9
	62	32	2.7	32	32	32	28	24	20	16	29	2.9	29	29	29	25	21	17	13
	57	33	2.7	33	33	33	29	25	21	17	29	2.9	29	29	30	26	22	18	14
1500	72	42	2.7	30	26	21	17	12	-	-	37	3.1	28	24	20	15	11	-	-
	67	38	2.7	38	33	29	24	20	15	11	33	2.9	33	31	27	22	18	13	9
	62	33	2.7	33	33	33	28	24	19	15	29	3.0	29	29	29	24	20	15	11
	57	33	2.7	33	33	33	29	24	20	15	29	3.0	29	29	29	25	20	16	11
		115°F									125°F									
900	72	32	3.3	18	16	13	11	8	-	-	28	3.7	17	14	12	9	7	-	-
	67	27	3.1	23	21	18	16	13	11	8	24	3.3	22	19	17	14	11	9	6
	62	24	3.2	24	23	21	18	16	13	11	21	3.5	21	20	18	15	13	10	8
	57	25	3.2	25	25	23	20	17	15	12	22	3.5	22	22	20	18	15	13	10
1050	72	32	3.3	21	18	15	12	9	-	-	29	3.5	19	16	13	10	7	-	-
	67	28	3.0	26	23	20	17	14	11	8	24	3.2	24	22	18	15	12	9	6
	62	25	3.1	25	24	23	20	17	14	11	21	3.4	21	21	20	17	14	11	8
	57	25	3.1	25	25	25	22	19	16	13	22	3.4	22	22	22	19	16	13	10
1200	72	33	3.2	23	20	16	13	9	-	-	29	3.4	21	18	14	11	7	-	-
	67	29	3.0	29	26	22	19	15	12	8	25	3.1	25	24	20	17	13	10	6
	62	25	3.1	25	25	25	22	18	15	11	22	3.3	22	22	22	18	15	11	8
	57	26	3.1	26	26	27	24	20	17	13	22	3.3	22	22	22	21	18	14	11
1350	72	33	3.3	25	21	17	13	9	-	-	29	3.6	23	19	15	11	7	-	-
	67	29	3.1	29	27	23	19	15	11	8	24	3.2	24	24	21	17	13	10	6
	62	25	3.2	25	25	25	21	17	13	9	21	3.4	21	21	21	17	13	9	5
	57	26	3.2	26	26	26	22	18	14	10	22	3.4	22	22	22	19	15	11	7
1500	72	33	3.4	27	22	18	13	9	-	-	28	3.8	25	20	16	11	7	-	-
	67	28	3.2	28	28	25	20	16	11	7	24	3.4	24	24	23	18	14	9	5
	62	25	3.3	25	25	25	20	16	11	7	21	3.6	21	21	21	16	12	7	3
	57	25	3.3	25	25	25	21	16	12	8	22	3.6	22	22	22	17	13	8	4

1. The capacities are gross ratings. For net capacity, deduct indoor blower motor, MBH=3.415 x kW. Refer to the appropriate Blower Performance table for the kW of the supply air blower motor.
2. These ratings include the condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

TABLE 17: DY048 COOLING CAPACITIES (4 TON)

Air on Evap-orator Coil		Temperature of Air on Condenser Coil																		
		75°F									85°F									
CFM	WB (°F)	Total Cap.[1] (MBH)	Total[2] Input (kW)	Sensible Capacity (MBH)[1] Return Dry Bulb (°F)							Total Cap.[1] (MBH)	Total[2] Input (kW)	Sensible Capacity (MBH)[1] Return Dry Bulb (°F)						
				86	83	80	77	74	71	68			86	83	80	77	74	71	68
1200	72	58	2.8	32	28	25	22	18	-	-	54	3.1	30	27	23	20	17	-	-
	67	57	2.8	43	39	36	32	29	26	22	51	3.1	40	36	33	29	26	23	19
	62	53	2.8	53	47	44	40	37	33	30	47	3.0	47	44	41	37	34	30	27
	57	51	2.8	51	51	49	45	42	38	35	46	3.0	46	46	43	39	36	32	29
1400	72	58	2.8	34	30	26	22	18	-	-	55	3.1	33	29	25	21	17	-	-
	67	56	2.8	45	41	37	33	29	25	21	52	3.1	43	39	35	31	27	23	19
	62	53	2.8	53	50	46	41	37	33	29	48	3.0	48	46	43	39	35	31	27
	57	51	2.8	51	51	51	47	43	39	34	46	3.0	46	46	45	41	37	33	29
1600	72	57	2.8	36	32	27	22	18	-	-	55	3.1	36	31	26	22	17	-	-
	67	56	2.8	48	43	39	34	29	25	20	52	3.1	46	42	37	32	28	23	18
	62	53	2.8	53	53	47	43	38	33	29	48	3.1	48	48	46	41	36	32	27
	57	51	2.8	51	51	53	48	43	39	34	47	3.0	47	47	48	43	39	34	29
1800	72	57	2.8	39	33	28	23	17	-	-	55	3.1	38	33	28	22	17	-	-
	67	56	2.8	52	46	40	35	30	24	19	52	3.1	49	44	39	34	28	23	18
	62	53	2.8	53	53	50	45	39	34	29	48	3.1	48	48	47	41	36	31	25
	57	51	2.8	51	51	52	46	41	36	30	47	3.1	47	47	47	42	37	31	26
2000	72	57	2.8	41	35	29	23	17	-	-	55	3.1	41	35	29	23	17	-	-
	67	55	2.8	55	48	42	36	30	24	18	52	3.1	52	47	41	35	29	23	17
	62	52	2.8	52	52	52	46	40	34	28	48	3.1	48	48	48	42	36	30	24
	57	50	2.8	50	50	50	44	38	32	26	46	3.1	46	46	46	40	34	28	23
		95°F									105°F									
1200	72	50	3.3	29	25	22	18	15	-	-	45	3.7	27	23	20	16	13	-	-
	67	45	3.4	37	33	30	27	23	20	16	39	3.7	34	31	27	24	21	17	14
	62	41	3.3	41	41	37	34	31	27	24	36	3.6	36	36	33	29	26	22	19
	57	40	3.3	40	40	37	33	30	26	23	35	3.6	35	35	32	29	25	22	19
1400	72	52	3.4	32	28	24	20	16	-	-	47	3.7	30	26	22	18	14	-	-
	67	47	3.4	41	37	33	29	25	20	16	41	3.7	38	34	30	26	22	18	14
	62	42	3.3	42	42	41	37	33	29	24	37	3.6	37	37	36	32	28	24	20
	57	42	3.3	42	42	40	36	32	28	24	37	3.6	37	37	35	31	27	23	19
1600	72	54	3.4	35	30	26	21	16	-	-	49	3.7	33	28	24	19	14	-	-
	67	49	3.4	45	40	35	31	26	21	17	43	3.7	41	37	33	28	24	19	14
	62	44	3.3	44	44	44	39	35	30	25	39	3.6	39	39	39	34	30	25	20
	57	43	3.3	43	43	43	39	34	29	25	39	3.6	39	39	39	34	29	25	20
1800	72	53	3.4	38	33	27	22	17	-	-	49	3.7	36	31	25	20	15	-	-
	67	48	3.4	46	43	38	32	27	22	16	43	3.7	42	39	35	30	24	19	14
	62	44	3.3	44	44	44	38	33	28	22	39	3.6	39	39	39	33	28	23	17
	57	43	3.3	43	43	43	38	32	27	22	38	3.7	38	38	38	33	27	22	17
2000	72	53	3.4	41	35	29	23	17	-	-	48	3.7	39	33	27	21	15	-	-
	67	48	3.4	48	46	40	34	28	22	16	42	3.7	42	41	37	31	25	19	14
	62	43	3.3	43	43	43	37	31	25	19	38	3.7	38	38	38	32	26	20	14
	57	42	3.3	42	42	42	37	31	25	19	38	3.7	38	38	38	32	26	20	14
		115°F									125°F									
1200	72	40	4.0	25	21	18	14	11	-	-	35	4.3	23	19	16	13	9	-	-
	67	34	3.9	32	28	25	21	18	15	11	28	4.2	28	26	22	19	15	12	9
	62	31	3.9	31	31	28	25	21	18	14	26	4.2	26	26	23	20	16	13	10
	57	30	3.9	30	30	28	24	21	17	14	25	4.2	25	25	23	20	16	13	9
1400	72	42	4.0	28	24	20	16	12	-	-	38	4.3	26	22	18	14	10	-	-
	67	36	4.0	35	32	28	24	20	16	11	30	4.3	30	29	25	21	17	13	9
	62	32	3.9	32	32	31	27	23	19	15	28	4.2	28	28	26	22	18	14	10
	57	32	3.9	32	32	31	27	23	19	15	27	4.3	27	27	26	22	18	14	10
1600	72	45	4.0	31	27	22	17	13	-	-	40	4.3	29	25	20	15	11	-	-
	67	38	4.0	38	35	30	26	21	16	12	32	4.3	32	32	28	23	19	14	9
	62	34	3.9	34	34	34	30	25	20	16	29	4.2	29	29	29	25	20	15	11
	57	34	4.0	34	34	34	29	25	20	15	29	4.3	29	29	29	24	20	15	10
1800	72	44	4.0	34	29	24	18	13	-	-	39	4.4	32	27	22	16	11	-	-
	67	37	4.0	37	36	33	27	22	17	11	31	4.3	31	31	30	25	20	14	9
	62	34	4.0	34	34	34	28	23	18	12	29	4.3	29	29	29	23	18	13	8
	57	33	4.0	33	33	33	28	23	17	12	29	4.3	29	29	29	23	18	13	7
2000	72	43	4.1	37	31	25	19	13	-	-	39	4.4	35	29	23	17	11	-	-
	67	36	4.0	36	36	35	29	23	17	11	31	4.3	31	31	31	27	21	15	9
	62	33	4.0	33	33	33	27	21	15	9	28	4.3	28	28	28	22	16	10	4
	57	33	4.0	33	33	33	27	21	15	9	28	4.3	28	28	28	22	16	10	4

1. The capacities are gross ratings. For net capacity, deduct indoor blower motor, MBH=3.415 x kW. Refer to the appropriate Blower Performance table for the kW of the supply air blower motor.
2. These ratings include the condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

TABLE 18: DY060 COOLING CAPACITIES (5 TON)

Air on Evap-orator Coil		Temperature of Air on Condenser Coil																	
		75°F									85°F								
CFM	WB (°F)	Total Cap.[1] (MBH)	Total[2] Input (kW)	Sensible Capacity (MBH)[1] Return Dry Bulb (°F)							Total Cap.[1] (MBH)	Total[2] Input (kW)	Sensible Capacity (MBH)[1] Return Dry Bulb (°F)						
				86	83	80	77	74	71	68			86	83	80	77	74	71	68
1500	72	73.9	3.7	39.9	35.6	31.3	27.0	22.8	-	-	69.2	4.3	38.6	34.3	30.1	25.8	21.5	-	-
	67	67.1	3.7	50.5	46.3	42.0	37.7	33.4	29.2	24.9	63.1	4.2	48.9	44.6	40.4	36.1	31.8	27.5	23.2
	62	60.7	3.6	60.7	55.2	50.9	46.7	42.4	38.1	33.8	57.6	4.1	57.6	53.6	49.4	45.1	40.8	36.5	32.3
	57	57.7	3.7	57.7	57.7	54.1	49.8	45.5	41.3	37.0	55.4	4.2	55.4	55.4	51.6	47.4	43.1	38.8	34.5
1750	72	76.2	3.7	44.3	39.2	34.1	29.1	24.0	-	-	71.3	4.3	42.9	37.8	32.7	27.7	22.6	-	-
	67	69.2	3.7	55.9	50.9	45.8	40.8	35.7	30.6	25.6	65.0	4.2	54.1	49.0	44.0	38.9	33.9	28.8	23.8
	62	62.7	3.7	62.7	59.9	55.6	50.5	45.4	40.4	35.3	59.4	4.1	59.4	57.4	53.8	48.7	43.7	38.6	33.6
	57	59.6	3.7	59.6	59.6	59.0	53.9	48.9	43.8	38.8	57.0	4.2	57.0	57.0	56.3	51.2	46.2	41.1	36.1
2000	72	78.6	3.7	48.7	42.8	37.0	31.2	25.3	-	-	73.4	4.3	47.1	41.3	35.4	29.6	23.8	-	-
	67	71.4	3.7	61.3	55.5	49.6	43.8	38.0	32.1	26.3	66.9	4.2	59.2	53.4	47.6	41.8	35.9	30.1	24.3
	62	64.6	3.7	64.6	64.6	60.2	54.3	48.5	42.7	36.9	61.1	4.2	61.1	61.1	58.2	52.4	46.6	40.7	34.9
	57	61.4	3.7	61.4	61.4	63.9	58.1	52.2	46.4	40.6	58.7	4.2	58.7	58.7	60.9	55.1	49.2	43.4	37.6
2250	72	79.1	3.7	52.5	45.8	39.2	32.5	25.9	-	-	73.8	4.3	50.9	44.2	37.6	30.9	24.3	-	-
	67	71.9	3.7	66.8	59.2	52.6	45.9	39.3	32.6	26.0	67.3	4.2	63.5	57.1	50.5	43.8	37.2	30.5	23.9
	62	65.0	3.7	65.0	65.0	62.8	56.2	49.5	42.9	36.3	61.4	4.2	61.4	61.4	60.0	53.4	46.7	40.1	33.4
	57	61.8	3.7	61.8	61.8	63.1	56.4	49.8	43.1	36.5	59.0	4.2	59.0	59.0	60.1	53.5	46.8	40.2	33.6
2500	72	79.6	3.8	56.3	48.8	41.4	33.9	26.5	-	-	74.2	4.3	54.6	47.2	39.7	32.3	24.8	-	-
	67	72.3	3.7	72.3	62.9	55.5	48.0	40.6	33.1	25.7	67.7	4.3	67.7	60.8	53.3	45.9	38.4	31.0	23.5
	62	65.5	3.7	65.5	65.5	65.5	58.0	50.6	43.1	35.7	61.8	4.2	61.8	61.8	61.8	54.3	46.9	39.4	32.0
	57	62.2	3.7	62.2	62.2	62.2	54.8	47.3	39.9	32.4	59.3	4.2	59.3	59.3	59.3	51.9	44.4	37.0	29.5
		95°F									105°F								
1500	72	64.6	4.8	37.4	33.1	28.8	24.5	20.2	-	-	61.3	5.4	35.6	31.3	27.0	22.8	18.5	-	-
	67	59.2	4.7	47.3	43.0	38.7	34.4	30.2	25.9	21.6	55.7	5.3	45.6	41.3	37.0	32.7	28.4	24.2	19.9
	62	54.6	4.6	54.6	52.1	47.8	43.5	39.3	35.0	30.7	51.5	5.3	51.5	50.0	45.8	41.5	37.2	32.9	28.6
	57	53.0	4.7	53.0	53.0	49.2	44.9	40.7	36.4	32.1	50.4	5.3	50.4	50.4	46.5	42.2	38.0	33.7	29.4
1750	72	66.4	4.8	41.5	36.4	31.3	26.3	21.2	-	-	62.7	5.4	39.5	34.4	29.4	24.3	19.3	-	-
	67	60.8	4.7	52.2	47.2	42.1	37.1	32.0	27.0	21.9	57.0	5.3	50.3	45.3	40.2	35.2	30.1	25.1	20.0
	62	56.1	4.6	56.1	54.8	52.0	47.0	41.9	36.9	31.8	52.7	5.3	52.7	52.0	49.7	44.7	39.6	34.6	29.5
	57	54.5	4.7	54.5	54.5	53.6	48.5	43.4	38.4	33.3	51.6	5.3	51.6	51.6	50.6	45.5	40.5	35.4	30.4
2000	72	68.2	4.8	45.6	39.7	33.9	28.1	22.2	-	-	64.1	5.4	43.4	37.6	31.7	25.9	20.1	-	-
	67	62.5	4.7	57.2	51.4	45.5	39.7	33.9	28.1	22.2	58.3	5.3	55.1	49.3	43.4	37.6	31.8	25.9	20.1
	62	57.6	4.7	57.6	57.6	56.3	50.4	44.6	38.8	32.9	53.9	5.3	53.9	53.9	53.7	47.9	42.1	36.2	30.4
	57	55.9	4.7	55.9	55.9	57.9	52.1	46.2	40.4	34.6	52.8	5.3	52.8	52.8	54.6	48.8	43.0	37.1	31.3
2250	72	68.5	4.8	49.3	42.6	36.0	29.3	22.7	-	-	64.2	5.4	47.1	40.5	33.9	27.2	20.6	-	-
	67	62.8	4.8	60.1	55.0	48.4	41.7	35.1	28.4	21.8	58.4	5.4	56.8	52.8	46.3	39.7	33.1	26.4	19.8
	62	57.8	4.7	57.8	57.8	57.2	50.5	43.9	37.2	30.6	54.0	5.3	54.0	54.0	53.9	47.3	40.6	34.0	27.3
	57	56.2	4.7	56.2	56.2	57.2	50.5	43.9	37.2	30.6	52.8	5.3	52.8	52.8	53.8	47.1	40.5	33.9	27.2
2500	72	68.8	4.9	53.0	45.5	38.1	30.6	23.2	-	-	64.3	5.5	50.9	43.4	36.0	28.5	21.1	-	-
	67	63.0	4.8	63.0	58.6	51.2	43.7	36.3	28.8	21.4	58.5	5.4	58.5	56.3	49.2	41.8	34.3	26.9	19.4
	62	58.1	4.7	58.1	58.1	58.1	50.6	43.2	35.7	28.3	54.1	5.3	54.1	54.1	54.1	46.6	39.2	31.7	24.3
	57	56.4	4.8	56.4	56.4	56.4	49.0	41.5	34.1	26.6	52.9	5.4	52.9	52.9	52.9	45.5	38.0	30.6	23.1
		115°F									125°F								
1500	72	57.9	6.0	33.8	29.5	25.3	21.0	16.7	-	-	54.6	6.7	32.0	27.8	23.5	19.2	14.9	-	-
	67	52.2	6.0	43.8	39.6	35.3	31.0	26.7	22.5	18.2	48.7	6.6	42.1	37.8	33.6	29.3	25.0	20.7	16.5
	62	48.5	5.9	48.5	48.0	43.7	39.4	35.1	30.9	26.6	45.4	6.6	45.4	45.4	41.6	37.3	33.1	28.8	24.5
	57	47.8	5.9	47.8	47.8	43.8	39.6	35.3	31.0	26.7	45.2	6.6	45.2	45.2	41.1	36.9	32.6	28.3	24.0
1750	72	59.0	6.0	37.5	32.5	27.4	22.4	17.3	-	-	55.3	6.7	35.6	30.5	25.5	20.4	15.4	-	-
	67	53.1	6.0	48.4	43.4	38.3	33.3	28.2	23.1	18.1	49.3	6.6	46.5	41.5	36.4	31.3	26.3	21.2	16.2
	62	49.3	5.9	49.3	49.1	47.4	42.4	37.3	32.3	27.2	46.0	6.5	46.0	46.0	45.1	40.1	35.0	30.0	24.9
	57	48.7	5.9	48.7	48.7	47.6	42.5	37.5	32.4	27.4	45.8	6.6	45.8	45.8	44.6	39.6	34.5	29.4	24.4
2000	72	60.0	6.0	41.3	35.4	29.6	23.8	17.9	-	-	55.9	6.6	39.1	33.3	27.4	21.6	15.8	-	-
	67	54.1	5.9	53.0	47.2	41.3	35.5	29.7	23.8	18.0	49.9	6.5	49.9	45.1	39.2	33.4	27.6	21.7	15.9
	62	50.2	5.9	50.2	50.2	51.2	45.3	39.5	33.7	27.9	46.5	6.5	46.5	46.5	46.5	42.8	37.0	31.1	25.3
	57	49.6	5.9	49.6	49.6	51.4	45.5	39.7	33.9	28.0	46.4	6.5	46.4	46.4	46.4	42.2	36.4	30.6	24.7
2250	72	59.9	6.1	45.0	38.4	31.7	25.1	18.5	-	-	55.7	6.7	42.9	36.3	29.6	23.0	16.3	-	-
	67	54.0	6.0	53.5	50.6	44.3	37.7	31.0	24.4	17.8	49.7	6.6	49.7	48.3	42.3	35.7	29.0	22.4	15.7
	62	50.2	5.9	50.2	50.2	50.6	44.0	37.3	30.7	24.1	46.3	6.6	46.3	46.3	46.3	40.7	34.1	27.4	20.8
	57	49.5	6.0	49.5	49.5	50.4	43.7	37.1	30.5	23.8	46.1	6.6	46.1	46.1	46.1	40.4	33.7	27.1	20.4
2500	72	59.9	6.1	48.8	41.3	33.9	26.4	19.0	-	-	55.4	6.7	46.7	39.2	31.8	24.3	16.9	-	-
	67	53.9	6.0	53.9	53.9	47.3	39.9	32.4	25.0	17.5	49.4	6.6	49.4	49.4	45.4	37.9	30.5	23.0	15.6
	62	50.1	6.0	50.1	50.1	50.1	42.6	35.2	27.7	20.3	46.1	6.6	46.1	46.1	46.1	38.6	31.2	23.7	16.3
	57	49.4	6.0	49.4	49.4	49.4	42.0	34.5	27.1	19.6	45.9	6.6	45.9	45.9	45.9	38.5	31.0	23.6	16.1

1. The capacities are gross ratings. For net capacity, deduct indoor blower motor, MBH=3.415 x kW. Refer to the appropriate Blower Performance table for the kW of the supply air blower motor.
2. These ratings include the condenser fan motors (total 1 kW) and the compressor motors but not the supply air blower motor.

TABLE 19: SUPPLY AIR BLOWER PERFORMANCE (DY036, 048, & 060 DIRECT DRIVE) SIDE DUCT APPLICATION

UNIT TONNAGE	MOTOR SPEED	AVAILABLE EXTERNAL STATIC PRESSURE - IWG[1]																	
		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
		CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS
	HI	1582	320	1538	335	1496	349	1458	363	1418	376	1381	390	1338	403	1298	417	1255	430
	MED/HI	1488	263	1440	276	1396	290	1354	303	1309	316	1263	329	1214	343	1158	358	1085	374
3[2]	MED	1339	208	1292	221	1247	234	1201	246	1152	258	1102	272	1036	288	967	303	924	313
	MED/LOW	1233	171	1184	183	1135	195	1082	207	1026	220	957	235	895	248	-	-	-	-
	LOW	1081	130	997	134	935	145	863	158	-	-	-	-	-	-	-	-	-	-
	HI	2056	636	2017	696	1978	714	1942	734	1906	749	1864	764	1815	769	1728	743	1582	685
	MED/HI	1866	539	1832	557	1795	571	1754	585	1722	602	1679	619	1636	638	1582	653	1508	639
4[2]	MED	1680	408	1641	426	1594	438	1558	455	1517	472	1469	490	1415	505	1370	521	1337	536
	MED/LOW	1582	362	1541	380	1495	391	1465	406	1426	423	1377	440	1326	455	1292	469	1247	485
	LOW	1300	223	1258	237	1202	247	-	-	-	-	-	-	-	-	-	-	-	-
	HI	2256	883	2258	931	2247	950	2223	964	2182	979	2125	971	2044	940	1958	898	1864	854
	MED/HI	2145	771	2127	784	2119	808	2089	826	2051	844	2014	859	1965	861	1896	843	1801	806
5[2]	MED	2020	637	1999	656	1985	675	1947	696	1910	715	1876	730	1832	740	1793	756	1725	748
	MED/LOW	1757	413	1713	432	1677	451	1639	468	1597	479	1559	497	1521	513	1472	523	-	-
	LOW	1570	327	1536	339	1499	356	-	-	-	-	-	-	-	-	-	-	-	-

1. Includes allowances for a wet evaporator coil, 1" filters, and the heat exchangers. Refer to STATIC RESISTANCES Table for resistance values.
2. Side Duct application (230 Volts)

TABLE 20: SUPPLY AIR BLOWER PERFORMANCE (DY036, 048, & 060 DIRECT DRIVE) BOTTOM DUCT APPLICATION

UNIT TONNAGE	MOTOR SPEED	AVAILABLE EXTERNAL STATIC PRESSURE - IWG[1]																	
		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
		CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS
	HI	1527	320	1485	335	1445	349	1408	363	1370	376	1334	390	1292	403	1254	417	1213	430
	MED/HI	1437	263	1391	276	1349	290	1308	303	1265	316	1221	329	1174	343	1120	358	1049	374
3[2]	MED	1293	208	1248	221	1205	234	1161	246	1114	258	1065	272	1002	288	935	303	894	313
	MED/LOW	1191	171	1144	183	1097	195	1046	207	992	220	926	235	866	248	-	-	-	-
	LOW	1045	130	964	134	904	145	-	-	-	-	-	-	-	-	-	-	-	-
	HI	1985	636	1947	696	1909	714	1875	734	1840	749	1800	764	1752	769	1668	743	1528	685
	MED/HI	1802	539	1768	557	1733	571	1694	585	1662	602	1621	619	1580	638	1528	653	1456	639
4[2]	MED	1622	408	1585	426	1539	438	1505	455	1465	472	1419	490	1367	505	1324	521	1291	536
	MED/LOW	1528	362	1489	380	1444	391	1415	406	1377	423	1330	440	1281	455	1248	469	1205	485
	LOW	1256	223	1216	237	1161	247	-	-	-	-	-	-	-	-	-	-	-	-
	HI	2177	883	2179	931	2169	950	2145	964	2106	979	2051	971	1973	940	1890	898	1800	854
	MED/HI	2071	771	2053	784	2045	808	2016	826	1980	844	1944	859	1897	861	1830	843	1739	806
5[2]	MED	1950	637	1929	656	1916	675	1880	696	1844	715	1811	730	1768	740	1731	756	1665	748
	MED/LOW	1697	413	1654	432	1619	451	1583	468	1542	479	1506	497	1469	513	-	-	-	-
	LOW	1516	327	1484	339	1448	356	-	-	-	-	-	-	-	-	-	-	-	-

1. Includes allowances for a wet evaporator coil, 1" filters, and the heat exchangers. Refer to STATIC RESISTANCES Table for resistance values.
2. Bottom Duct application (230 Volts)

TABLE 21: STATIC RESISTANCES

DESCRIPTION		RESISTANCE, IWG										
		CFM										
		1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
ECONOMIZER[1,3]		0.07	0.08	0.09	0.11	0.13	0.15	0.17	0.20	0.23	0.26	0.30
ELECTRIC HEATERS[1]	7-15KW	0.04	0.05	0.06	0.07	0.08	0.10	0.12	0.14	0.16	0.19	0.22
	20-30KW	0.06	0.07	0.08	0.09	0.11	0.13	0.15	0.17	0.20	0.23	0.26
COOLING ONLY[2]		0.08	0.10	0.12	0.14	0.16	0.18	0.20	0.23	0.26	0.29	0.32

1. Deduct these resistance values from the available external static pressure shown in SUPPLY AIR BLOWER PERFORMANCE Tables.
2. Add these resistance values to the available static resistance values on SUPPLY AIR BLOWER PERFORMANCE Tables.
3. The pressure through the economizer is greater for 100% outdoor air than for 100% return air. If the resistance of the return air duct system is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

TABLE 22: ELECTRIC HEATER CFM LIMITATIONS

UNIT MODEL SIZE NOMINAL TONS	VOLTAGE	MINIMUM SUPPLY AIR CFM					
		HEATER SIZE NOMINAL KW					
		5	7	10	15	20	30
3	208/230-1-60	1100	1100	1200	1200	1300	-
	208/230-3-60	1100	1100	1200	1200	1300	-
	460-3-60	-	1100	1200	1200	1300	-
	575-3-60	-	-	1200	1200	1300	-
4	208/230-1-60	1300	1300	1300	1300	1300	-
	208/230-3-60	1300	1300	1300	1300	1300	-
	460-3-60	-	1300	1300	1300	1300	-
	575-3-60	-	-	1300	1300	1400	-
5	208/230-1-60	1600	1600	1600	1600	1600	1600
	208/230-3-60	1600	1600	1600	1600	1600	1600
	460-3-60	1600	1600	1600	1600	1600	1600
	575-3-60	-	1600	1600	1600	1600	1800

TABLE 23: ELECTRICAL DATA - DY036, 048 & 060 DIRECT DRIVE W/O POWERED CONVENIENCE OUTLET

MODEL TONNAGE	VOLTAGE	COMPRESSORS		OD FAN MOTOR FLA	ID BLOWER MOTOR FLA	CONV OUTLET FLA	ELECTRIC HEATER MODEL NO.	HEATER KW	HEATER AMPS	MIN. CIRCUIT AMPACITY (AMPS)	MAX. FUSE/ BRKR[1] SIZE (AMPS)
		RLA EACH	LRA EACH								
DY036	208-1-60	11.3	68.0	2.3	8.0	0.0	None	-	-	24.4	30
							2CE04510506	4.0	19.2	34.0	35
							2CE04510706	5.6	26.9	43.7	45
							2CE04511006	8.0	38.5	58.1	60
							2CE04511506	11.9	57.2	81.5	90
							2CE04512006	15.9	76.4	105.6	110
	230-1-60	11.3	68.0	2.3	8.0	0.0	None	-	-	24.4	30
							2CE04510506	5.3	22.1	37.6	40
							2CE04510706	7.5	31.3	49.1	50
							2CE04511006	10.6	44.2	65.2	70
							2CE04511506	15.9	66.3	92.8	100
							2CE04512006	21.2	88.3	120.4	125
	208-3-60	8.3	68.0	2.3	8.0	0.0	None	-	-	20.7	25
							2CE04510525[2]	4.0	11.1	23.9	25
							2CE04510725[2]	5.6	15.5	29.4	30
							2CE04511025	8.0	22.2	37.8	40
							2CE04511525	11.9	33.0	51.3	60
							2CE04512025	15.9	44.1	65.2	70
	230-3-60	8.3	68.0	2.3	8.0	0.0	None	-	-	20.7	25
							2CE04510525[2]	5.3	12.7	25.9	30
							2CE04510725[2]	7.5	18.0	32.6	35
							2CE04511025	10.6	25.5	41.9	45
							2CE04511525	15.9	38.2	57.8	60
							2CE04512025	21.2	51.0	73.7	80
	460-3-60	5.1	34.0	1.3	8.0	0.0	None	-	-	11.7	15
							2CE04510746[2]	6.8	8.2	15.2	20
							2CE04511046[2]	10.1	12.1	20.2	20
							2CE04511546[2]	13.6	16.4	25.4	25
							2CE04512046[2]	19.5	23.5	34.3	35
	575-3-60	3.2	26.0	1.3	8.0	0.0	None	-	-	8.2	15
							2CE04511058	10.6	10.2	16.7	20
							2CE04511558	15.9	15.3	23.1	25
							2CE04512058	21.2	20.4	29.5	30
DY048	208-1-60	15.4	86.0	2.3	10.6	0.0	None	-	-	32.2	40
							2CE04510506	4.0	19.2	37.3	45
							2CE04510706	5.6	26.9	46.9	50
							2CE04511006	8.0	38.5	61.3	70
							2CE04511506	11.9	57.2	84.8	90
							2CE04512006	15.9	76.4	108.8	110
	230-1-60	15.4	86.0	2.3	10.6	0.0	None	-	-	32.2	40
							2CE04510506	5.3	22.1	40.9	45
							2CE04510706	7.5	31.3	52.3	60
							2CE04511006	10.6	44.2	68.5	70
							2CE04511506	15.9	66.3	96.1	100
							2CE04512006	21.2	88.3	123.7	125
	208-3-60	11.5	84.0	2.3	10.6	0.0	None	-	-	27.3	35
							2CE04510525[2]	4.0	11.1	27.3	35
							2CE04510725[2]	5.6	15.5	32.7	35
							2CE04511025	8.0	22.2	41.0	45
							2CE04511525	11.9	33.0	54.5	60
							2CE04512025	15.9	44.1	68.4	70
	230-3-60	11.5	84.0	2.3	10.6	0.0	None	-	-	27.3	35
							2CE04510525[2]	5.3	12.7	29.2	35
							2CE04510725[2]	7.5	18.0	35.8	40
							2CE04511025	10.6	25.5	45.1	50
							2CE04511525	15.9	38.2	61.1	70
							2CE04512025	21.2	51.0	77.0	80
	460-3-60	5.8	42.0	1.3	10.6	0.0	None	-	-	13.9	15
							2CE04510746[2]	6.8	8.2	16.8	20
							2CE04511046[2]	10.1	12.1	21.8	25
							2CE04511546[2]	13.6	16.4	27.1	30
							2CE04512046[2]	19.5	23.5	35.9	35
	575-3-60	5.1	34.0	1.3	10.6	0.0	None	-	-	11.7	15
							2CE04511058	10.6	10.2	18.0	25
							2CE04511558	15.9	15.3	24.4	30
							2CE04512058	21.2	20.4	30.8	35

TABLE 23: ELECTRICAL DATA - DY036, 048 & 060 DIRECT DRIVE W/O POWERED CONVENIENCE OUTLET (CONT)

MODEL TONNAGE	VOLTAGE	COMPRESSORS		OD FAN MOTOR FLA	ID BLOWER MOTOR FLA	CONV OUTLET FLA	ELECTRIC HEATER MODEL NO.	HEATER KW	HEATER AMPS	MIN. CIRCUIT AMPACITY (AMPS)	MAX. FUSE/ BRKR[1] SIZE (AMPS)
		RLA EACH	LRA EACH								
DY060	208-1-60	28.8	145.0	2.3	10.6	0.0	None	-	-	48.9	50
							2CE04510506	4.0	19.2	48.9	50
							2CE04510706	5.6	26.9	48.9	50
							2CE04511006	8.0	38.5	61.3	70
							2CE04511506	11.9	57.2	84.8	90
							2CE04512006	15.9	76.4	108.8	110
							2CE04513006	22.2	106.7	146.7	150
	230-1-60	28.8	145.0	2.3	10.6	0.0	None	-	-	48.9	50
							2CE04510506	5.3	22.1	48.9	50
							2CE04510706	7.5	31.3	52.3	60
							2CE04511006	10.6	44.2	68.5	70
							2CE04511506	15.9	66.3	96.1	100
							2CE04512006	21.2	88.3	123.7	125
							2CE04513006	29.6	123.3	167.4	175
	208-3-60	17.3	123.0	2.3	10.6	0.0	None	-	-	34.5	35
							2CE04510525[2]	4.0	11.1	34.5	35
							2CE04510725[2]	5.6	15.5	34.5	35
							2CE04511025	8.0	22.2	41.0	45
							2CE04511525	11.9	33.0	54.5	60
							2CE04512025	15.9	44.1	68.4	70
							2CE04513025	22.2	61.6	90.3	100
	230-3-60	17.3	123.0	2.3	10.6	0.0	None	-	-	34.5	35
							2CE04510525[2]	5.3	12.7	34.5	35
							2CE04510725[2]	7.5	18.0	35.8	40
							2CE04511025	10.6	25.5	45.1	50
							2CE04511525	15.9	38.2	61.1	70
							2CE04512025	21.2	51.0	77.0	80
							2CE04513025	29.6	71.2	102.3	110
	460-3-60	9.6	70.0	1.3	10.6	0.0	None	-	-	18.6	20
							2CE04510746[2]	6.8	8.2	18.6	20
							2CE04511046[2]	10.1	12.1	21.8	25
							2CE04511546[2]	13.6	16.4	27.1	30
							2CE04512046[2]	19.5	23.5	35.9	35
							2CE04513046[2]	28.8	34.6	49.9	50
	575-3-60	7.4	53.0	1.3	10.6	0.0	None	-	-	14.5	15
							2CE04511058	10.6	10.2	18.0	20
							2CE04511558	15.9	15.3	24.4	25
							2CE04512058	21.2	20.4	30.8	35
							2CE04513058	30.4	29.3	41.9	40

1. HACR Type per NEC.
2. These electric heaters do not include a fuse box. If a fuse box is required to meet a local code (i.e. Chicago), the fuse block accessories 2FB04700825 and 2FB04700846 are available for field installation.

TABLE 24: ELECTRICAL DATA - DY036, 048 & 060 DIRECT DRIVE W/ POWERED CONVENIENCE OUTLET

MODEL TONNAGE	VOLTAGE	COMPRESSORS		OD FAN MOTOR FLA	ID BLOWER MOTOR FLA	CONV OUTLET FLA	ELECTRIC HEATER MODEL NO.	HEATER KW	HEATER AMPS	MIN. CIRCUIT AMPACITY (AMPS)	MAX. FUSE/ BRKR[1] SIZE (AMPS)
		RLA EACH	LRA EACH								
DY036	208-1-60	11.3	68.0	2.3	8.0	10.0	None	-	-	34.4	45
							2CE04510506	4.0	19.2	46.5	50
							2CE04510706	5.6	26.9	56.2	60
							2CE04511006	8.0	38.5	70.6	80
							2CE04511506	11.9	57.2	94.0	100
							2CE04512006	15.9	76.4	118.1	125
	230-1-60	11.3	68.0	2.3	8.0	10.0	None	-	-	34.4	45
							2CE04510506	5.3	22.1	50.1	60
							2CE04510706	7.5	31.3	61.6	70
							2CE04511006	10.6	44.2	77.7	80
							2CE04511506	15.9	66.3	105.3	110
							2CE04512006	21.2	88.3	132.9	150
	208-3-60	8.3	68.0	2.3	8.0	10.0	None	-	-	31.1	40
							2CE04510525[2]	4.0	11.1	36.4	40
							2CE04510725[2]	5.6	15.5	41.9	45
							2CE04511025	8.0	22.2	50.3	60
							2CE04511525	11.9	33.0	63.8	70
							2CE04512025	15.9	44.1	77.7	80
	230-3-60	8.3	68.0	2.3	8.0	10.0	None	-	-	31.1	40
							2CE04510525[2]	5.3	12.7	38.4	40
							2CE04510725[2]	7.5	18.0	45.1	50
							2CE04511025	10.6	25.5	54.4	60
							2CE04511525	15.9	38.2	70.3	80
							2CE04512025	21.2	51.0	86.2	90
	460-3-60	5.1	34.0	1.3	8.0	5.0	None	-	-	16.7	20
							2CE04510746[2]	6.8	8.2	21.5	25
							2CE04511046[2]	10.1	12.1	26.4	25
							2CE04511546[2]	13.6	16.4	31.7	30
							2CE04512046[2]	19.5	23.5	40.6	40
	575-3-60	3.2	26.0	1.3	8.0	4.0	None	-	-	12.4	15
							2CE04511058	10.6	10.2	21.7	25
							2CE04511558	15.9	15.3	28.1	30
							2CE04512058	21.2	20.4	34.5	35
DY048	208-1-60	15.4	86.0	2.3	10.6	10.0	None	-	-	42.2	50
							2CE04510506	4.0	19.2	49.8	50
							2CE04510706	5.6	26.9	59.4	60
							2CE04511006	8.0	38.5	73.8	80
							2CE04511506	11.9	57.2	97.3	100
							2CE04512006	15.9	76.4	121.3	125
	230-1-60	15.4	86.0	2.3	10.6	10.0	None	-	-	42.2	50
							2CE04510506	5.3	22.1	53.4	60
							2CE04510706	7.5	31.3	64.8	70
							2CE04511006	10.6	44.2	81.0	90
							2CE04511506	15.9	66.3	108.6	110
							2CE04512006	21.2	88.3	136.2	150
	208-3-60	11.5	84.0	2.3	10.6	10.0	None	-	-	37.3	45
							2CE04510525[2]	4.0	11.1	39.6	45
							2CE04510725[2]	5.6	15.5	45.2	50
							2CE04511025	8.0	22.2	53.5	60
							2CE04511525	11.9	33.0	67.0	70
							2CE04512025	15.9	44.1	80.9	90
	230-3-60	11.5	84.0	2.3	10.6	10.0	None	-	-	37.3	45
							2CE04510525[2]	5.3	12.7	41.7	45
							2CE04510725[2]	7.5	18.0	48.3	50
							2CE04511025	10.6	25.5	57.6	60
							2CE04511525	15.9	38.2	73.6	80
							2CE04512025	21.2	51.0	89.5	90
	460-3-60	5.8	42.0	1.3	10.6	5.0	None	-	-	18.9	20
							2CE04510746[2]	6.8	8.2	23.1	25
							2CE04511046[2]	10.1	12.1	28.1	30
							2CE04511546[2]	13.6	16.4	33.3	35
							2CE04512046[2]	19.5	23.5	42.2	40
	575-3-60	5.1	34.0	1.3	10.6	4.0	None	-	-	15.7	20
							2CE04511058	10.6	10.2	23.0	25
							2CE04511558	15.9	15.3	29.4	30
							2CE04512058	21.2	20.4	35.8	35

TABLE 24: ELECTRICAL DATA - DY036, 048 & 060 DIRECT DRIVE W/ POWERED CONVENIENCE OUTLET (CONT)

MODEL TONNAGE	VOLTAGE	COMPRESSORS		OD FAN MOTOR FLA	ID BLOWER MOTOR FLA	CONV OUTLET FLA	ELECTRIC HEATER MODEL NO.	HEATER KW	HEATER AMPS	MIN. CIRCUIT AMPACITY (AMPS)	MAX. FUSE/ BRKR[1] SIZE (AMPS)
		RLA EACH	LRA EACH								
DY060	208-1-60	28.8	145.0	2.3	10.6	10.0	None	-	-	58.9	60
							2CE04510506	4.0	19.2	58.9	60
							2CE04510706	5.6	26.9	59.4	60
							2CE04511006	8.0	38.5	73.8	80
							2CE04511506	11.9	57.2	97.3	100
							2CE04512006	15.9	76.4	121.3	125
							2CE04513006	22.2	106.7	159.2	175
	230-1-60	28.8	145.0	2.3	10.6	10.0	None	-	-	58.9	60
							2CE04510506	5.3	22.1	58.9	60
							2CE04510706	7.5	31.3	64.8	70
							2CE04511006	10.6	44.2	81.0	90
							2CE04511506	15.9	66.3	108.6	110
							2CE04512006	21.2	88.3	136.2	150
							2CE04513006	29.6	123.3	179.9	200
	208-3-60	17.3	123.0	2.3	10.6	10.0	None	-	-	44.5	45
							2CE04510525[2]	4.0	11.1	44.5	45
							2CE04510725[2]	5.6	15.5	45.2	50
							2CE04511025	8.0	22.2	53.5	60
							2CE04511525	11.9	33.0	67.0	70
							2CE04512025	15.9	44.1	80.9	90
							2CE04513025	22.2	61.6	102.8	110
	230-3-60	17.3	123.0	2.3	10.6	10.0	None	-	-	44.5	45
							2CE04510525[2]	5.3	12.7	44.5	45
							2CE04510725[2]	7.5	18.0	48.3	50
							2CE04511025	10.6	25.5	57.6	60
							2CE04511525	15.9	38.2	73.6	80
							2CE04512025	21.2	51.0	89.5	90
							2CE04513025	29.6	71.2	114.8	125
	460-3-60	9.6	70.0	1.3	10.6	5.0	None	-	-	23.6	25
							2CE04510746[2]	6.8	8.2	23.6	25
							2CE04511046[2]	10.1	12.1	28.1	30
							2CE04511546[2]	13.6	16.4	33.3	35
							2CE04512046[2]	19.5	23.5	42.2	40
							2CE04513046[2]	28.8	34.6	56.2	60
	575-3-60	7.4	53.0	1.3	10.6	4.0	None	-	-	18.5	20
							2CE04511058	10.6	10.2	23.0	25
							2CE04511558	15.9	15.3	29.4	30
							2CE04512058	21.2	20.4	35.8	35
							2CE04513058	30.4	29.3	46.9	45

1. HACR Type per NEC.
2. These electric heaters do not include a fuse box. If a fuse box is required to meet a local code (i.e. Chicago), the fuse block accessories 2FB04700825 and 2FB04700846 are available for field installation.

TABLE 25: DY PHYSICAL DATA

MODELS		DY		
		036	048	060
EVAPORATOR BLOWER	Centrifugal Blower (Dia. x Wd. in.)	12 X 10	12 X 10	12 X 10
	Fan Motor HP (Direct Drive)	3/4	1	1
EVAPORATOR COIL	Rows Deep	3	4	4
	Fins Per Inch	13	13	13
	Face Area ($Ft.^2$)	5.1	5.1	5.1
CONDENSER FANS	Propeller Dia. (in.)	24	24	24
	Fan Motor HP	1/2	1/2	1/2
	Nom. CFM	4200	4200	4200
CONDENSER COILS	Rows Deep	2	2	2
	Fins Per Inch	18	18	18
	Face Area ($Ft.^2$)	17.1	17.1	17.1
COMPRESSOR	Quantity	1	1	1
	Type	Recip.	Recip.	Scroll
AIR FILTERS	Quantity Per Unit (15” X 20” X 1” or 2“)	2	2	2
	Quantity Per Unit (14” X 25” X 1” or 2“)	1	1	1
	Total Face Area ($Ft.^2$)	6.3	6.3	6.3
CHARGE	Refrigerant 22 (lbs./oz.)	9/4	9/8	11/8

TABLE 26: ELECTRIC HEAT CORRECTION FACTORS

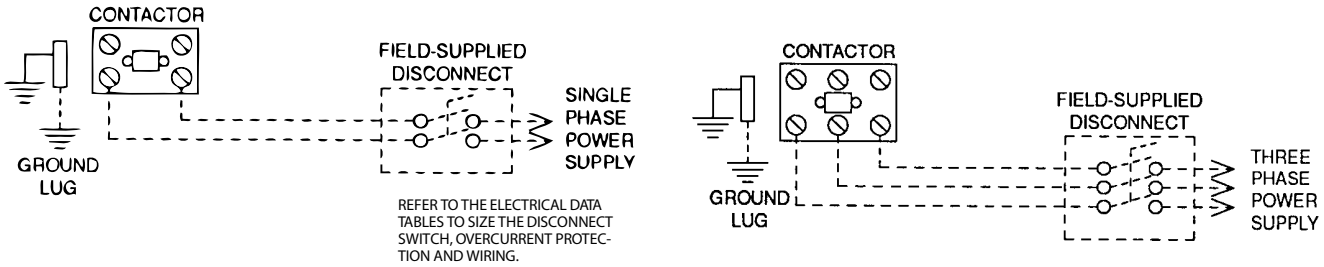
NOMINAL VOLTAGE	VOLTAGE	kW CAP. MULTI-PLIER
208	208	1.00
240	230	0.92
480	460	0.92
600	575	0.92

TABLE 27: VOLTAGE LIMITATIONS[1]

POWER SUPPLY	VOLTAGE	
	MIN.	MAX.
208/230-1-60	187	252
208/230-3-60	187	252
460-3-60	432	504
575-3-60	540	630

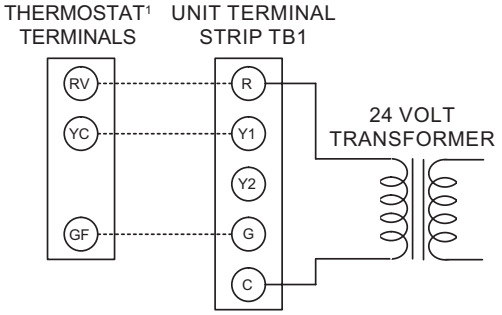
1. Utilization Range “A” in accordance with ARI Standard 110.

TYPICAL POWER WIRING



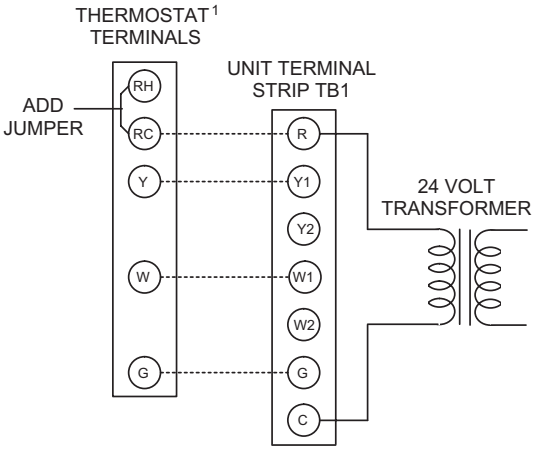
TYPICAL CONTROL WIRING

COOLING ONLY (24 VOLT THERMOSTAT)



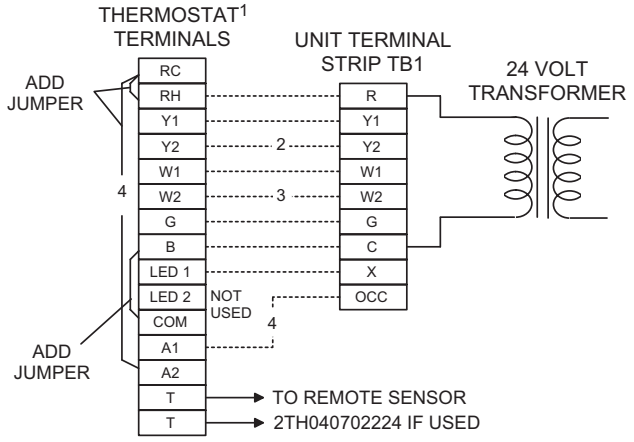
[1]24 VOLT THERMOSTAT 2TH07701024. TO CONTROL THE ECONOMIZER ON SECOND STAGE COOLING, USE THE THERMOSTAT 2TH0401224.

COOLING / HEATING (24 VOLT THERMOSTAT)



[1]24 VOLT THERMOSTAT 2ET07701024. TO CONTROL THE ECONOMIZER ON THE SECOND STAGE COOLING OR TO HAVE AN ELECTRIC HEAT ACCESSORY WITH TWO STAGES OF HEAT, USE THERMOSTAT 2TH0471024.

COOLING / HEATING (ELECTRONIC THERMOSTAT) MULTI STAGE



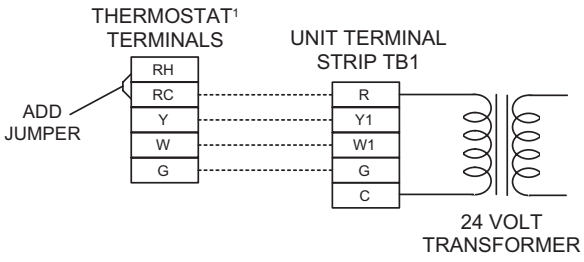
[1] ELECTRONIC PROGRAMMABLE THERMOSTAT 2ET04700224 (INCLUDES SUBBASE).

[2] SECOND STAGE COOLING IS NOT REQUIRED ON UNITS LESS ECONOMIZER.

[3] SECOND STAGE HEATING IS ONLY REQUIRED ON UNITS WITH A TWO STAGE ELECTRIC HEATER OR 2 STAGE GAS HEAT.

[4] REMOVE JUMPER J2 FROM TERMINALS 4 AND 9 ON JUMPER PLUG CONNECTOR P6 ON UNITS WITH ECONOMIZER. TERMINALS A1 AND A2 PROVIDE A RELAY OUT-PUT TO CLOSE THE OUTDOOR ECONOMIZER DAMPERS WHEN THE THERMOSTAT SWITCHES TO THE SET-BACK POSITION.

COOLING / HEATING (ELECTRONIC THERMOSTAT) SINGLE STAGE



[1]ELECTRONIC PROGRAMMABLE THERMOSTAT 2ET07701024 (INCLUDES SUBBASE). TO CONTROL THE ECONOMIZER ON SECOND STAGE COOLING, USE THERMOSTAT 2TH04700224.

FIGURE 2 - TYPICAL FIELD POWER & CONTROL WIRING

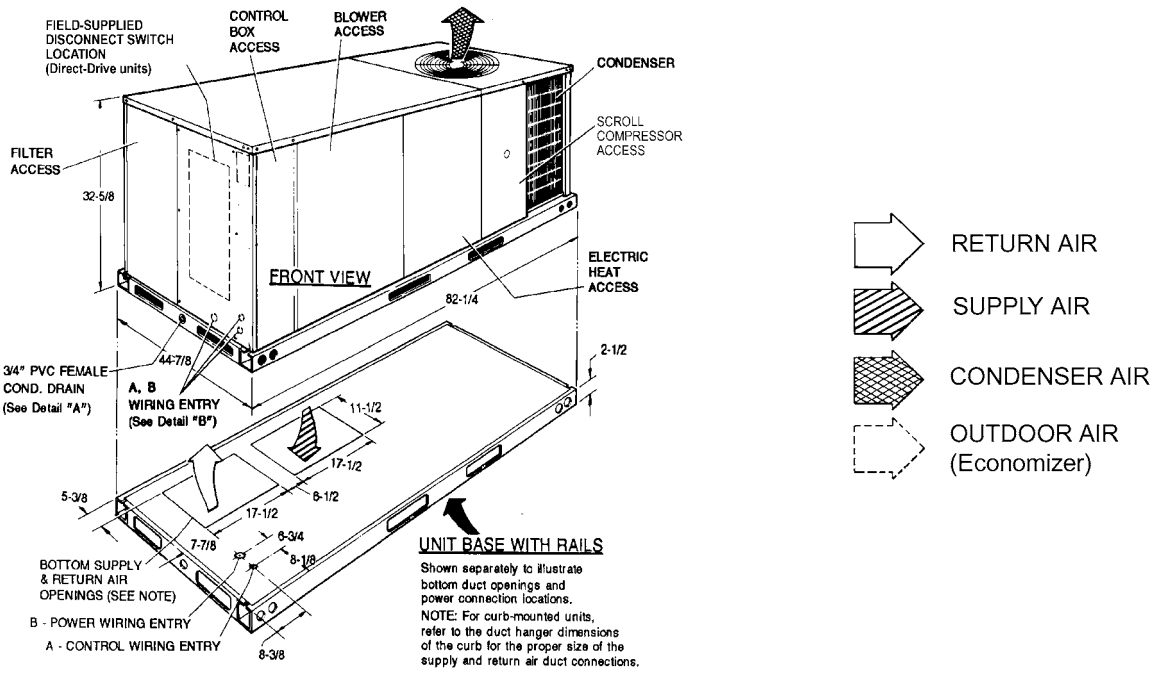


FIGURE 3 - UNIT DIMENSIONS (3 - 5 TON COOLING ONLY/ELECTRIC HEAT) FRONT VIEW

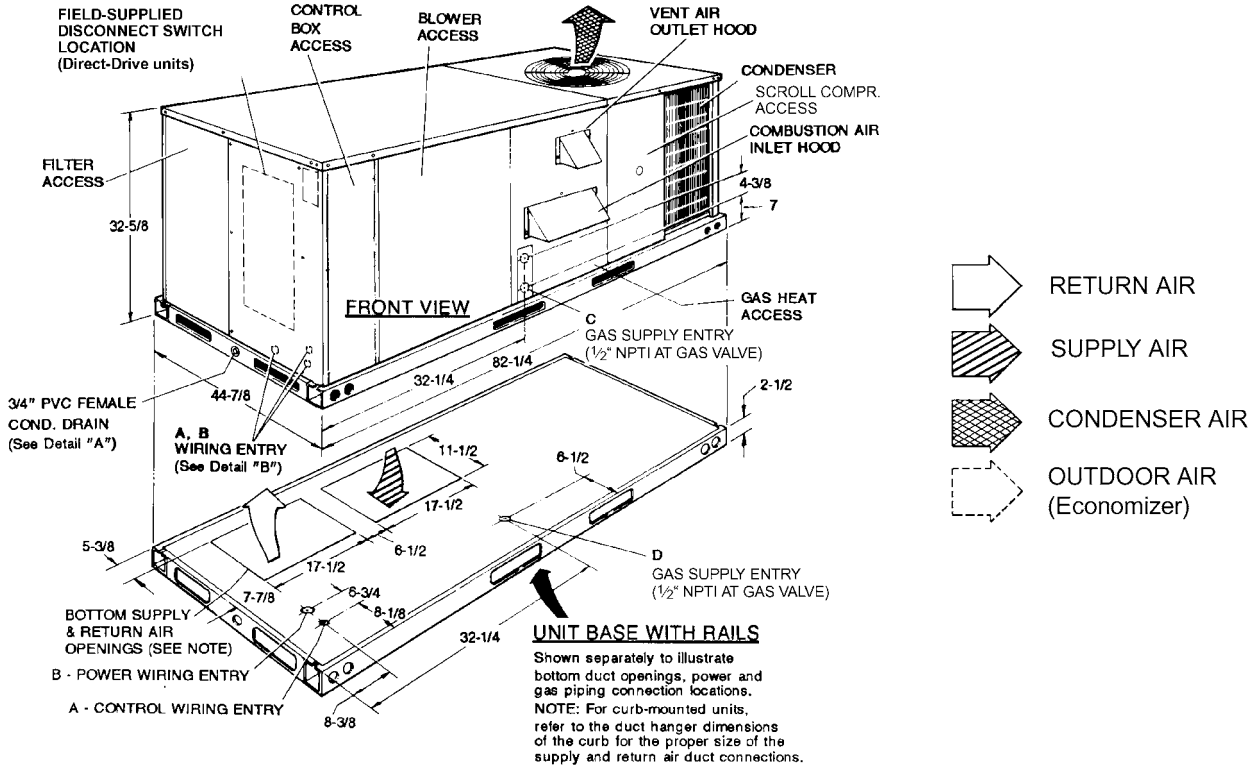


FIGURE 4 - UNIT DIMENSIONS (3 - 5 TON COOLING/GAS HEAT) FRONT VIEW

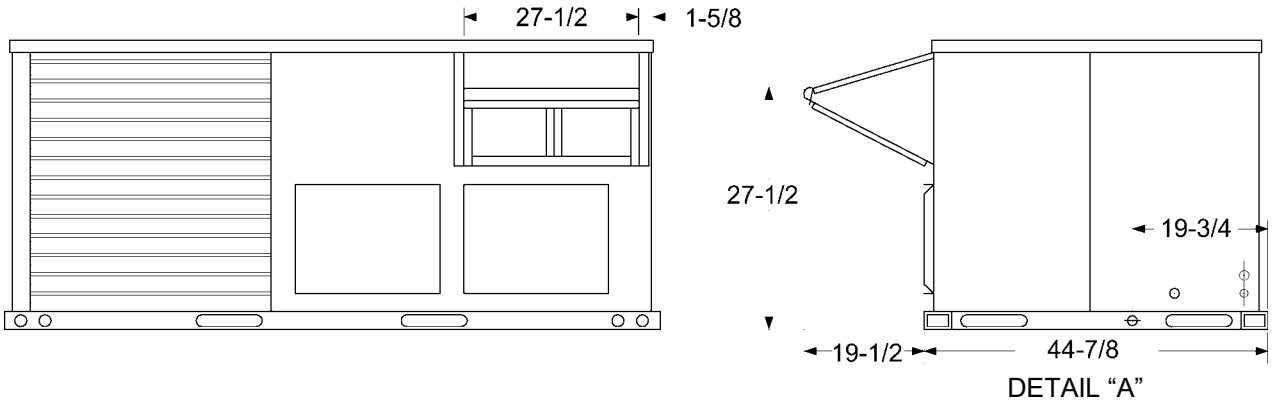
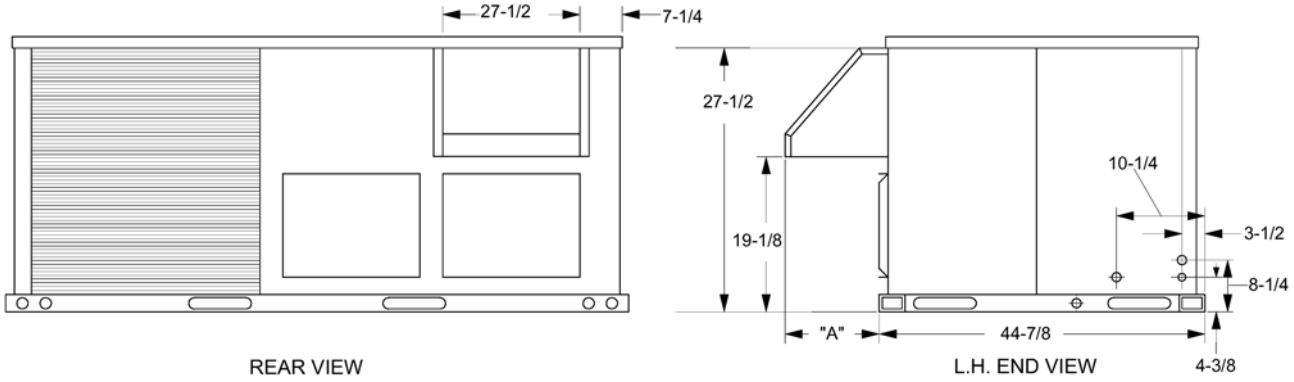


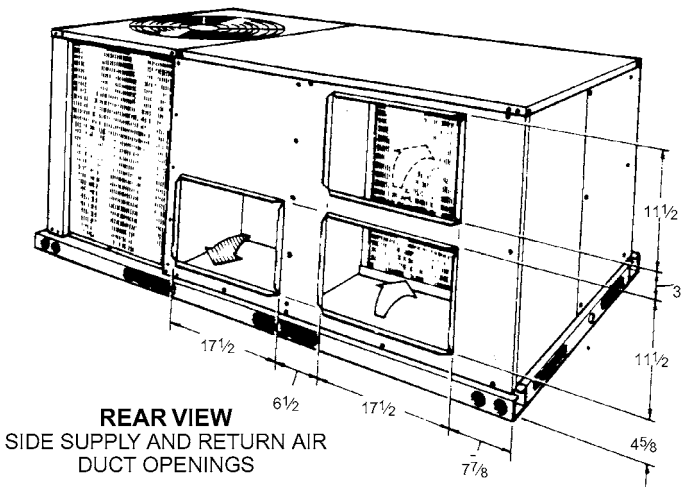
FIGURE 5 - UNIT WITH ECONOMIZER RAINHOOD



DIMENSION "A"	
FIXED OUTDOOR AIR DAMPER	12
MOTORIZED DAMPER	16-1/2

DETAIL “B”

FIGURE 6 - UNIT WITH FIXED OUTDOOR AIR/MOTORIZED DAMPER RAINHOOD



DUCT COVERS - Units are shipped with all air duct openings covered.
For side duct applications;
1. Remove and discard the supply and return air duct covers.
2. Connect ductwork to duct flanges on the rear of the unit.

For bottom duct applications;
1. Remove the side supply air duct cover to gain access to the bottom supply air knockout panel.
2. Remove and discard the bottom knockout panel.
3. Replace the side duct cover.
4. With filter section access panel removed from the unit, remove and discard the bottom return air knockout panel.
5. Replace the filter access panel.

FIGURE 7 - UNIT DIMENSIONS (REAR VIEW)

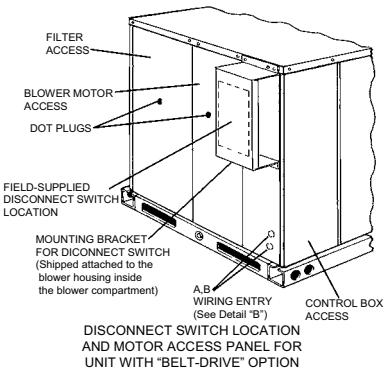

FILTER ACCESS
BLOWER MOTOR ACCESS
DOT PLUGS
FIELD-SUPPLIED DISCONNECT SWITCH LOCATION
MOUNTING BRACKET FOR DICONNECT SWITCH (Shipped attached to the blower housing inside the blower compartment)
A,B WIRING ENTRY (See Detail "B")
CONTROL BOX ACCESS
DISCONNECT SWITCH LOCATION AND MOTOR ACCESS PANEL FOR UNIT WITH "BELT-DRIVE" OPTION

FIGURE 8 - DISCONNECT/BLOWER ACCESS LOCATION

TABLE 28: UTILITIES ENTRY

HOLE	OPENING SIZE (DIA.)	USED FOR	
A	7/8" KO[1]	Control Wiring[2]	Side
			Bottom
B	2" KO[1]	Power Wiring	Side
			Bottom
C	1-5/8" KO	Gas Piping (Front)	
D	1-1/2" KO	Gas Piping (Bottom)	

1. Opening in the bottom to the unit can be located by the side in the insulation.
2. Do not remove the 2" knockout ring.

TABLE 29: MINIMUM CLEARANCES

LOCATION	CLEARANCE
Front	24" (Cooling/Electric Heat) 32" (Gas Heat)
Rear	12" (Less Economizer) 36" (With Economizer or Fixed Air/Motorized Damper)
Left Side (Filter Access)	24" (Less Economizer) 36" (With Economizer)
Right Side (Cond. Coil)	24"
Below Unit[1]	0"
Above Unit[2]	72" (For Condenser Air Discharge)

1. Units may be installed on combustible floors made from wood or class A, B, or C roof covering material.
2. Units must be installed outdoors. Overhanging structures or shrubs should not obstruct condenser air discharge outlet.

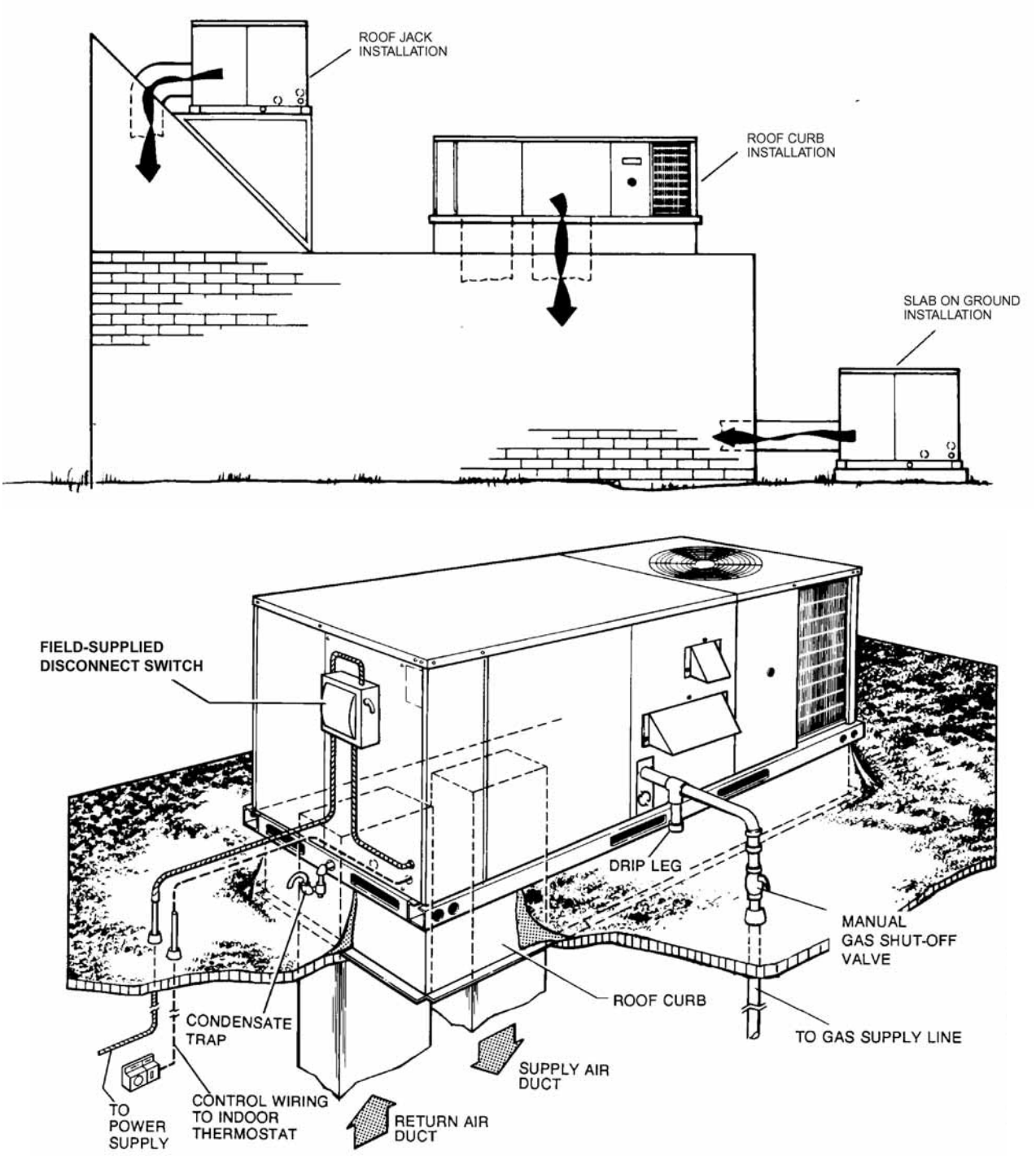


FIGURE 9 - TYPICAL APPLICATIONS

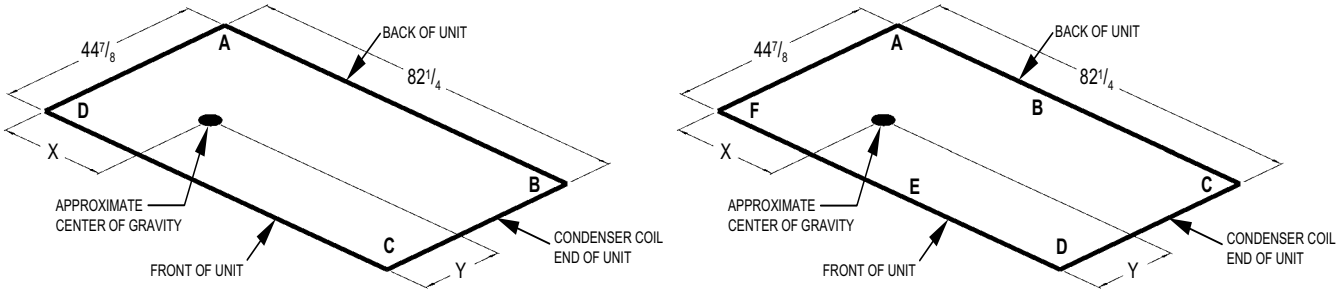


FIGURE 10 -FOUR AND SIX POINT LOADING

TABLE 30: DY 4 AND 6 POINT LOADS WEIGHT DISTRIBUTION

UNIT	TOTAL	4-Point Loading (lb)				6-Point Loading (lb)					
		A	B	C	D	A	B	C	D	E	F
DY036 Cooling/ Electric	**575**	132	125	155	164	89	85	82	102	106	110
DY036N04	**615**	141	133	166	175	95	91	88	110	114	118
DY036D06	**625**	143	135	168	178	96	93	89	111	115	120
DY036N08	**635**	145	138	171	181	98	94	91	113	117	122
DY036D10	**645**	148	140	174	184	99	96	92	115	119	124
DY048 Cooling/ Electric	**585**	134	127	158	167	90	87	84	104	108	112
DY048(D,N)06	**635**	145	138	171	181	98	94	91	113	117	122
DY048(D,N)10	**655**	150	142	177	187	101	97	94	117	121	125
DY060 Cooling/ Electric	**590**	135	128	159	168	91	88	84	105	109	113
DY060D06	**640**	147	139	173	182	99	95	92	114	118	123
DY060N08	**650**	149	141	175	185	100	97	93	116	120	125
DY060(D,N)10	**660**	151	143	178	188	102	98	95	118	122	126

TABLE 31: CENTER OF GRAVITY

DIMENSION	3 - 5 TON
X	40”
Y	20”

TABLE 32: OPERATING WEIGHTS (LBS.)

MODEL SIZE			3 TON	4 TON	5 TON
BASIC UNIT	DY (Cooling Only)		575	585	590
	DY (Gas/Electric)	N04	615	-	-
		N06	-	635	-
		N08	635	-	650
		N10	-	655	660
		D06	625	635	640
		D10	645	655	660
OPTIONS	Economizer		50		
	Motorized Damper		26		
	Electric Heater	5 - 7 kW	18		
		10 - 15 kW	23		
		20 - 30 kW	28		
ACCY.	Roof Curb		92		
	Barometric Relief / Fixed Air Damper		10		

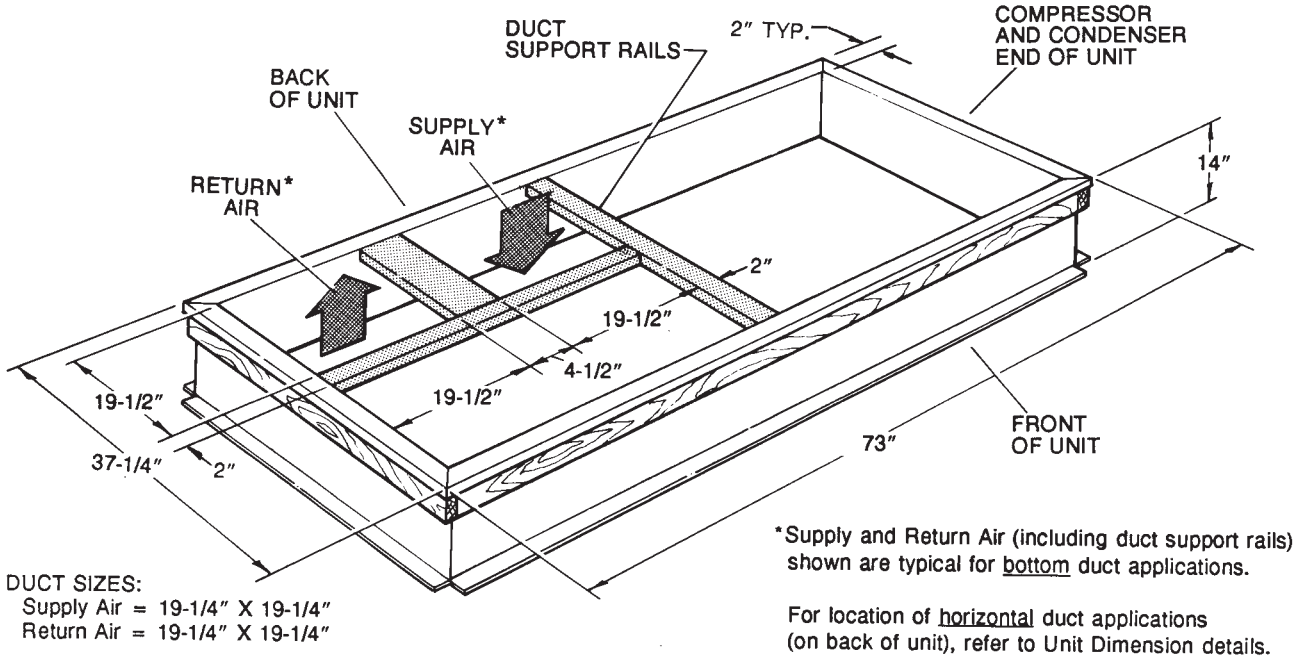


FIGURE 11 -ROOF CURB DIMENSIONS

GUIDE SPECIFICATIONS

GENERAL

Units shall be manufactured by York International Unitary Products Group in an ISO 9001 certified facility.

York's Sunline Magnum™ units are convertible single package units. Although the units are primarily designed for curb mounting on a roof, they can also be slab-mounted at ground level or set on steel beams above a finished roof. Cooling only, cooling with gas heat and cooling with electric heat models are available with a wide variety of factory-mounted options and field-installed accessories to make them suitable for almost every application. All units are self-contained and assembled on full perimeter base rails with holes in the four corners for overhead rigging. Every unit is completely piped, wired, charged and tested at the factory to simplify the field installation and to provide years of dependable operation. All models (including those with an economizer) are suitable for either bottom or horizontal duct connections. Models with power exhaust are suitable for bottom duct connections only. For bottom duct, remove the sheet metal panels from the supply and return air openings through the base of the unit. For horizontal duct, remove the supply and return air panels on the rear of the unit.

All non-Scroll compressors include crankcase heaters and all compressors have internal pressure relief. Every refrigerant circuit includes a liquid line filter-drier, a discharge line high pressure switch and a suction line with a freezestat and low pressure/loss of charge switch.The unit control circuit includes a 75 VA transformer, a 24-volt circuit breaker and a relay board with a compressor lockout circuit, a terminal strip for thermostat wiring, plus an additional set of pin connectors to simplify the interface of additional field controls. All models are CSA listed. All models include a 1-year limited warranty on the complete unit. Compressors and electric heater elements carry a 5-year warranty. Aluminized steel and Stainless steel tubular heat exchangers carry a 10-year warranty.

DESCRIPTION

Units shall be factory-assembled, single packaged, Electric Cooling/Gas Heat, Electric Cooling/Optional Electric Heat and designed for outdoor mounted installation.

The 3 ton, 4 ton and 5 ton units shall have minimum SEER rating of 14. They shall have built-in field convertible duct connections for down discharge supply/return or horizontal discharge supply/return, and be available with factory installed options or field installed accessories. The units shall be factory wired, piped, charged with R-22 refrigerant and factory tested prior to shipment. All unit wiring shall be both numbered and color coded. All units the cooling performance shall be rated in accordance with DOE and ARI test procedures. Units shall be CSA listed, classified to ANSI Z21.47, UL 1995/CSA No. 236 standards.

UNIT CABINET

Unit cabinet shall be constructed of G90 galvanized steel, with exterior surfaces coated with a non-chalking, powdered paint finish, certified at 1000 hours salt spray test per ASTMB117 standards. Indoor blower section shall be insulated with a minimum 1/2” thick insulation, coated on the airside. Aluminum foil faced insulation shall be used in the furnace compartment and be fastened with ridged fasteners to prevent insulation from entering the air stream. Cabinet panels shall be “large” size, easily removable for servicing and maintenance. Full perimeter base rails shall be provided to assure reliable transit of equipment, overhead rigging and proper sealing on roof curb applications. Disposable 1" filters shall be furnished and be accessible through a removable access door, sealed airtight. Units filter track shall be designed to accommodate either 1" or 2" filters. Fan performance measuring ports shall be provided on the outside of the cabinet to allow accurate air measurements of evaporator fan performance without removing panels or creating air bypass of the coils. Condensate pan shall be internally sloped and conform to ASHRAE 62-89 self-draining standards. Condensate connection shall be a minimum of 3/4” I.D. female and be a ridged mount connection.

INDOOR (EVAPORATOR) FAN ASSEMBLY

The indoor fan shall be a factory installed direct drive. Job site selected (B.H.P.) brake horsepower shall not exceed the motors nameplate horsepower rating, plus the service factor. Units shall be designed not to operate above service factor. Fan wheel shall be double-inlet type with forward-curved blades, dynamically balanced to operate smoothly throughout the entire range of operation. Airflow design shall be constant air volume. Bearings shall be sealed and permanently lubricated for longer life and no maintenance.

OUTDOOR (CONDENSER) FAN ASSEMBLY

The outdoor fan shall be of the direct-driven propeller type, discharge air vertically, have aluminum blades riveted to a corrosion resistant steel spider bracket and shall be dynamically balanced for smooth operation. The outdoor fan motor shall be totally enclosed with permanently lubricated bearings, internally protected against overload conditions and staged independently.

REFRIGERANT COMPONENTS

Compressor:

a. Shall be internally protected with internal high-pressure relief and over temperature protection.

b. Shall have internal spring isolation and sound muffling to minimize vibration and noise, and be externally isolated on a dedicated, independent mounting.

Coils:

a. Evaporator and condenser coils shall have aluminum plate fins mechanically bonded to seamless internally enhanced copper tubes with all joints brazed. Special Phenolic coating shall be available as a factory option.

b. Evaporator and Condenser coils shall be of the direct expansion, draw-thru, design.

Refrigerant Circuit and Refrigerant Safety Components shall include:

a. Independent fixed-orifice or thermally operated expansion devices.

b. Filter drier/strainer to eliminate any moisture or foreign matter.

c. Accessible service gage connections on both suction and liquid lines to charge, evacuate, and measure refrigerant pressure during any necessary servicing or troubleshooting, without losing charge.

d. The refrigeration system shall provide at least 15°F of sub-cooling at design conditions.

UNIT CONTROLS

a. Unit shall be complete with self-contained low-voltage control circuit protected by a resetable circuit breaker on the 24-volt transformer side.

b. Unit shall incorporate a lockout circuit which provides reset capability at the space thermostat or base unit, should any of the following standard safety devices trip and shut off compressor.

c. Loss-of-charge/Low-pressure switch.

d. High-pressure switch.

e. Freeze-protection thermostat, evaporator coil.

f. Unit shall incorporate “AUTO RESET” compressor over temperature, over current protection.

g. Unit shall operate with conventional thermostat designs and have a low voltage terminal strip for easy hook-up.

h. Unit control board shall have on-board diagnostics and fault code display.

i. Standard controls shall include anti-short cycle and low voltage protection, and permit cooling operation down to 0°F.

j. Control board shall monitor each refrigerant safety switch independently.

k. Control board shall retain last 5 fault codes in non volatile memory which will not be lost in the event of a power loss.

GAS HEATING SECTION (SINGLE OR 2 STAGE)

Shall be designed with induced draft combustion with post purge logic, energy saving direct spark ignition, and redundant main gas valve. Venter wheel shall be constructed of stainless steel for corrosion resistance. The heat exchanger shall be of the tubular type, constructed of T1-40 aluminized steel for corrosion resistance and allowing minimum mixed air entering temperature of 25°F. Burners shall be of the inshot type, constructed of aluminum coated steel and contain air mixture adjustments. All gas piping shall enter the unit cabinet at a single location through either the side or curb without any field modifications. Integrated control boards shall provide timed control of evaporator fan functioning and burner ignition. Heating section shall be provided with the following minimum protection:

a. Primary and auxiliary high-temperature limit switches.

b. Induced draft motor speed sensor.

c. Flame roll out switch.

d. Flame proving controls.

e. If any of the above safety devices trip, a LED (light-emitting diode) indicator shall flash a diagnostic code that indicates which safety switch has tripped.

ELECTRIC HEATING SECTION

An electric heating section, with nickel chromium elements, shall be provided in a range of 5 thru 30 KW, offering two stages of capacity - 16 KW and above on 208/230 volt heaters and 20 KW and above on 460 and 575 volt heaters. The heating section shall have a primary limit control(s) and automatic reset to prevent the heating element system from operating at an excessive temperature. The heating section assembly shall slide out of the unit for easy maintenance and service. Units with Electric Heating shall be wired for a single point power supply with branch circuit fusing (where required).

UNIT OPERATING CHARACTERISTICS

a. Unit shall be capable of starting and running at 125°F outdoor temperature, exceeding maximum load criteria of ARI Standard 210/240. The compressor, with standard controls, shall be capable of operation down to 0°F outdoor temperature. Unit shall be provided with fan time delay to prevent cold air delivery before heat exchanger warms up (Gas heat only).

ELECTRICAL REQUIREMENTS

All unit power wiring shall enter unit cabinet at a single factory provided location and be capable of side or bottom entry, to minimize roof penetrations and avoid unit field modifications. Separate side and bottom openings shall be provided for the control wiring.

STANDARD LIMITED WARRANTIES

- Compressor 5 Years
- Heat Exchanger 10 Years
- Electric Heat Element 5 Years
- Other Parts 1 Year

OPTIONAL OUTDOOR AIR (Shall be made available by either/or):

- **ELECTRONIC ENTHALPY AUTOMATIC ECONO-MIZER**- Outdoor and return air dampers that are interlocked and positioned by a fully-modulating, spring return damper actuator. The maximum leakage rate for the outdoor air intake dampers shall not exceed 2% when dampers are fully closed and operating against a pressure differential of 0.5 IWG. A unit-mounted potentiometer shall be provided to adjust the outdoor and return air damper assembly to take in CFM of outdoor air to meet the minimum ventilation requirement of the conditioned space during normal operation. During economizer operation, a mixed-air temperature control shall modulate the outdoor and return air damper assembly to prevent the supply air temperature from dropping below 55°F. Changeover from compressor to economizer operation shall be provided by an integral electronic enthalpy control that feeds input into the basic module. The outdoor intake opening shall be covered with a rain hood that matches the exterior of the unit. Water eliminator/filters shall be provided. Simultaneous economizer/compressor operation is also possible. Dampers shall fully close on power loss.
- **MOTORIZED OUTDOOR AIR DAMPERS** - Outdoor air dampers are positioned by a 2-position, spring-return damper actuator. The maximum leakage rate for the outdoor air intake dampers shall not exceed 2% when dampers are fully closed and operating against a pressure differential of 0.5 IWG. A unit-mounted potentiometer shall be provided to adjust the outdoor damper assembly to take in the design CFM of outdoor air to meet the ventilation requirements of the conditioned space during normal operation. Whenever the indoor fan motor is energized, the dampers open up to one of two pre-selected positions - regardless of the outdoor air enthalpy. Dampers return to the fully closed position when the indoor fan motor is de-energized. Dampers shall fully close on power loss.

OTHER PRE-ENGINEERED ACCESSORIES AVAILABLE

- **ROOF CURB** - 14"and 8" high, full perimeter curb with wood nailer (shipped knocked-down).
- **BAROMETRIC RELIEF DAMPER** - Contains a rain hood, air inlet screen, exhaust damper and mounting hardware. Used to relieve internal air pressure through the unit.
- **PROPANE CONVERSION KIT** - Contains new orifices and gas valve parts to convert from natural to L.P. gas. One per unit required.
- **HIGH ALTITUDE - NATURAL GAS** - Contains orifices required for applications between 2000 and 6000 feet altitude.
- **HIGH ALTITUDE - PROPANE GAS** - Contains orifices required for applications between 2000 and 6000 feet altitude. Must be used with propane conversion kit.
- **LOW NOX** - Required to reduce the emission of nitrogen oxides below 40 nanograms per joule.
- **GAS PIPING** - Contains 1/2” pipe nipples, fittings and gas cock (including panel assess gaskets) required for bottom gas supply connection with external shut off.
- **POWER EXHAUST OPTION** - To work in conjunction with economizers.
- **ELECTRIC HEATERS**
- **ECONOMIZER/MOTORIZED DAMPER RAIN HOOD** - Contains all hood panels and the hardware for assembling.
- **MANUAL OUTDOOR AIR DAMPER**
- **COIL GUARD KIT** - Guard for cooling coil.
- **HAIL GUARD**
- **FLUE EXHAUST EXTENSION**

OTHER FACTORY INSTALLED OPTIONS

- **POWER EXHAUST OPTION** - To work in conjunction with economizers.
- **STAINLESS STEEL HEAT EXCHANGER**
- **STAINLESS STEEL DRAIN PAN**
- **BOTTOM DRAIN CONNECTION**
- **TECHNICOAT PHENOLIC COATED CONDENSER AND EVAPORATOR COIL**
- **ELECTRONIC SINGLE ENTHALPY ECONOMIZER**
- **DIRTY FILTER SWITCH**
- **PHASE MONITOR**
- **COIL GUARD**
- **POWERED GFI CONVENIENCE OUTLET**
- **NON-POWERED GFI CONVENIENCE OUTLET**
- **BAS CONTROLS (Simplicity® INTELLI-Comfort™, CPC, JOHNSON, HONEYWELL, NOVAR)**
- **BAS READY ECONOMIZER (2-10 V.D.C. ACTUATOR WITHOUT A CONTROLLER)**
- **HINGED FILTER DOOR ACCESS AND TOOLESS ACCESS PANELS**
- **2" PLEATED FILTERS**
- **DISCONNECT SWITCH**
- **SUPPLY AIR SMOKE DETECTOR**
- **RETURN AIR SMOKE DETECTOR**

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